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# Worldwide Report

EPIDEMIOLOGY

No. 246



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11 September 1981

## WORLDWIDE REPORT

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WORLDWIDE AFFAIRS

BRIEFS

USSR AIDS CUBA--Soviet equipment for spraying antimosquito agents is being delivered to Cuba. The equipment will be used to kill mosquitoes spreading the dengue fever. Earlier, the Cuban leader Fidel Castro accused the United States' Central Intelligence Agency of being behind the epidemic of the dengue fever in Cuba. [Text]  
[LD192206 Moscow World Service in English 2100 GMT 19 Aug 81]

CSO: 5400/2194

## BRIEFS

POLIO VACCINATION CAMPAIGN--The second dose in the fourth polio vaccination campaign will be given on 16 August, beginning at 0700 hours. We appeal to mothers of children up to 5 years of age to take them to vaccination centers to receive the second dose, so as to protect the nation's youth from this terrible disease. Considering the massive attendance at the more than 300 centers around the capital at the time of the first dose, it is perhaps unnecessary to make this appeal. Children who have not been given the first dose for whatever reason should nevertheless be taken to the vaccination centers. [Excerpts] [Luanda JORNAL DE ANGOLA in Portuguese 13 Aug 81 p 2]

CSO:5400/5247

## RAPID DEVELOPMENT MAKES NT VULNERABLE TO DISEASES

Canberra THE AUSTRALIAN in English 16 Jul 81 p 30

[Text] THE rapid development of mining towns and international links has made the Northern Territory susceptible to renewed outbreaks of malaria and dengue fever.

The senior medical entomologist with the Northern Territory Department of Health, Mr P. Whelan, has warned that the Territory is vulnerable to the re-establishment of a range of mosquito-carried diseases, including malaria, dengue, encephalitis and polyarthritis.

He said although malaria was eradicated from the Territory in 1962, the area remained receptive and vulnerable to its re-establishment through mosquito vectors, and new mining centres and towns would be susceptible to outbreaks.

"This will be particularly true where those mining ventures are in close proximity to large and uncontrollable sources of malaria vectors," Mr Whelan said.

The Gove bauxite deposits were considered a particularly susceptible situation, because both the Aboriginal settlements at Yirrkala and the mining town of Nhulunbur were adjacent to large sources of the mosquito regarded as the primary vector in past malaria epidemics.

"Stringent precautions were taken against this possibility, with the result that no malaria transmissions oc-

curred, but both towns will remain areas of concern," Mr Whelan said.

Uranium deposits in the Alligator Rivers area were close to poorly drained rivers and creek systems, and residential developments in these areas would also be susceptible to outbreaks.

The location of the Jabiru township next to a slow-flowing creek would mean that area, too, was susceptible to attacks by malaria-carrying mosquitoes which breed in such waters.

"The trend of setting up air-conditioned and screened demountable accommodation in the exploration and mining construction phases has reduced the susceptibility," Mr Whelan said.

## EXPOSURE

"But night-time relaxation in these areas results in frequent exposure to mosquito vectors."

"As much of the uranium mining development is in or near national parks, it is unlikely that any large-scale engineering measures can be carried out to reduce the sources of vectors."

"In towns such as Jabiru, self-protection measures and periodic adult mosquito control will need to be carried out during times of risk."

The movement of Aborigines back to traditional lands had made them more susceptible to malaria.

"Many Aboriginal people liv-

ing a more traditional lifestyle do not regard with concern mosquito levels which would be intolerable to a newcomer," Mr Whelan said.

The risks were also increased because Aborigines usually established settlements near traditional camping sites which were near sources of water - and mosquitoes.

Mr Whelan warned that Darwin was becoming increasingly vulnerable to diseases as it expanded nearer and nearer to mosquito-prone areas.

There was a need to establish a buffer zone at least 15km wide between such prolific breeding areas as the Leanyer swamp, adjacent to Darwin's newer suburbs.

Mr Whelan said the arrival of more overseas visitors was also increasing the chances of a malaria outbreak in the Territory as the disease began to show a resurgence around the world.

The possibility of influxes of more refugees from Asia was also posing a problem.

"Prior to the influx of refugees, most of the malaria cases arriving in Darwin involved people returning from holidays in South-East Asia," he said.

"In 1975 the number of cases in the Northern Territory reached a peak at 48."

"After 1975, with the elimination of the overland route to Asia through Timor, the removal of Timor as a holiday area for local residents, and the diversion of the people from Papua New Guinea to

Carma, there was a steady decrease in the number of cases, down to seven in 1961.

"But this is not a reason for complacency. Recently there has been an increase in overseas travel from the Northern Territory, with the Darwin-Bali run being particularly popular.

"Other new and accessible routes will be opened up to other areas of Indonesia, South-East Asia and New Guinea, so we can expect a rise in the number of malaria cases arriving in the Northern Territory.

"If these introduced malaria cases occur in our mining towns or Aboriginal settlements, our vulnerability to the re-establishment of malaria

will be particularly high.

"Of further concern must be the increasing proportion of cases of the most dangerous form of malaria, *Plasmodium falciparum*, arriving in Australia.

"The spread of Chloroquine-resistant *Plasmodium falciparum* will mean the commonly-used prophylaxis is becoming increasingly unreliable and we can expect more cases of this type of malaria in the Northern Territory.

"Apart from infected people, there is also the risk of parasites being introduced with *Anopheles* mosquitoes, and the introduction of new *Anopheles* species."

## BRIEFS

TOWNSVILLE SEWAGE---State cabinet could be presented soon with an indictment of Townsville as the last city in Queensland to continue dumping raw sewage into the sea. The city presenting itself as the ideal place for a northern gambling casino and major tourist destination is also the state's second biggest local government area and possible site of Queensland's second international airport. Yet, according to the Water Quality Council, three-quarters of the city's domestic sewage and most of its industrial effluent is discharged into Cleveland Bay, less than five kilometres from the city centre. "It's a scandal," the council director, Mr H. F. Desmond, said yesterday. "That's about 16.25 million litres of untreated sewage a day, some of which must drift as far as Magnetic Island." Mr Desmond said a report on Townsville would be presented to his ministerial head. "Undoubtedly it will be considered by Cabinet," he said. Townsville Mayor, Alderman Mike Reynolds, protested last night that "there is no health problem--and never has been." He said the city's budget priority for more than 20 years had been to sewer the city and this was now 96 percent completed. "We just haven't had the money for treatment works," he said. "But we are now estimating costs and have commissioned a study. We hope to begin work in a year or two." City Engineer, Mr Hugh Mayston, said the Water Quality Council had imposed "an unreal set of standards on the community." "The emphasis on treatment has only been noticeable since the council was established five or six years ago," he said. [Excerpt] [Brisbane THE COURIER-MAIL in English 28 Jul 81 p 9]

OYSTERS NOW CHOLERA-FREE--Sydney--Georges River oysters have been given a clean bill of health after last week's cholera scare. Tests on 12 batches of oysters from all parts of the river have proved them free of cholera bacteria. The tests began after a strain of cholera bacteria was discovered 10 days ago in the river, which runs into Botany Bay through Sydney's southern suburbs. Tests on Georges River oysters will continue this week. Now the search is on for the source of the bacteria. A water-purification specialist is coming out from England to try to trace the origin of the bacteria, which public-health officials believe was caused by pollution. With health clearance, the Georges River oyster farmers can now try to repair the damage done to the industry by the cholera fears. Many farmers are angry at the NSW Health Commission's handling of the scare. The president of the Georges River branch of the Australian Oyster Farmers and Producers' Association, Mr Bob Drake, said that a lot of damage could have been avoided if the commission completed its research before sounding the alarm. [Excerpt] [Perth THE WEST AUSTRALIAN in English 13 Jul 81 p 35]

# \$1.4 MILLION IDB GRANT WILL IMPROVE SEWERAGE SYSTEM

Bridgetown ADVOCATE-NEWS in English 1 Aug 81 p 1

[Text]

Barbados is getting financial assistance from the Washington based Inter-American Development Bank (IDB) to finance feasibility studies of sewerage systems for the island's South and West Coasts.

The Bank announced yesterday that it had approved some Can\$1.4 million which would finance the studies.

They are designed to determine the most feasible alternative sewerage system for the two coasts, as well as for some areas in Bridgetown, adjacent to the sewerage facilities currently under construction in the capital.

The new initiative is expected to boost waste disposal along the coastal strip. This is currently carried out by septic tanks and other facilities.

The Bank, in a statement, said that intense development along the two coasts has reduced both areas required for soil absorption methods.

"This has resulted in pollution of ground water, posing a threat to the health of the areas population. In addition, studies indicate that marine life is being harmed by sewage disposal from the coast," the IDB declared.

The Bank said that improvement in the disposal of sewage along the coasts was of particular importance to Barbados since it would improve conditions for tourism to

flourish. Tourism is Barbados' main earner of foreign exchange.

In 1978 tourist arrivals reached a peak 317 000 and that more than doubled the 1970 figure.

The technical co-operation was extended on a contingent repayment basis from the Canadian Fund for project preparation.

It will be used by the Ministry of Health to contract a consulting engineering firm to carry out the study which will encompass a stretch of approximately 15 kilometres of Western coastline between Brighton, St. Michael to Speightstown extending 200 to 500 metres inland and a stretch of approximately 10 kilometres between Needham's point and Oistins on the southern coast, extending about 500 metres inland.

Specifically, the project will include:

- Feasibility studies and recommendations for the collection, treatment and disposal of sewage in the south coast, West Coast and greater Bridgetown area.

- The preparation and presentation of preliminary engineering designs and cost estimates for the construction of a sewer system in the study areas.

- The total cost of the project is estimated at Can\$1 638 000, of which the Bank's technical co-operation will cover 86 per cent and the Ministry of Health the remaining 14 per cent.

# INFANT MORTALITY DECLINES IN SAO PAULO

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 2 Aug 81 p 27

[Text] Infant mortality declined by 13.04 percent in Sao Paulo State in May of this year, in relation to April, according to the monthly statistical table just published by SEADE Foundation [State Data Analysis System]. SEADE specialists consider lower indices normal for May, owing to the milder weather, neither as hot as summer, when dehydration occurs, nor as severe as winter, when fatalities due to respiratory problems increase. Nonetheless, they note the fact that the figures for May 1981 are also 8.26 percent below May of last year, declining to 44.28 deaths in infants in the first year of life for every 1,000 live births. This level is satisfactory; developed countries consider up to 50 deaths in the first year of life per 1,000 live births acceptable, and Sao Paulo is already slightly below that rate.

The recently released table indicates that in May 1980, for every 1,000 live births, 57.52 infants under 1 year old died in the capital and 51.30 infants died in the interior, for a rate of 53.42 deaths statewide, whereas in May 1981, for every 1,000 live births, there were 48.93 deaths in the capital and 41.83 in the interior, resulting in a rate of 44.28 for the state.

In absolute numbers, there were 65,499 live births and 898 stillbirths in Sao Paulo State in May. In the same period, there were 14,155 deaths: 2,900 of these were children less than 1 year of age and 7,437 were over 50 years of age. There were 21,402 marriages, which should be the record for the year, since the greatest number of weddings traditionally take place in May.

Always with reference to May, the highest infant mortality rate in the state was recorded in Grande Sao Paulo, the only region with over 50 deaths per 1,000 live births, with 51.42 deaths. The second highest infant mortality rate was recorded in Sorocaba, with 49.73 deaths per 1,000 live births, while the lowest rates, which may be considered unusually good, even in world terms, were recorded in Campinas, with 28.21 deaths, Sao Jose do Rio Preto, with 29.88, and Presidente Prudente, with 30.79 deaths per 1,000 live births.

## Causes of Death

The principal cause of deaths in children under 1 year of age (on which infant mortality rates are based) was perinatal problems, that is, deaths linked to the birth process itself or to maternal ailments. Perinatal problems were responsible for 38.26 percent of infant deaths.



The second cause of infant deaths involved respiratory ailments, which killed 23.79 percent of the children who died in this period, partly as a result of the pollution in Sao Paulo. Infections and parasitic diseases caused 21.79 percent of the infant deaths recorded in this period, an indication of hygiene problems, although at a much lower level than in other regions of the country. Congenital defects are responsible for 7.41 percent of infant deaths, occupying fourth place as a cause of infant deaths.

Other causes of death are insignificant: 0.90 percent result from ailments of the digestive tract; 0.09 percent from various forms of cancer; 2.71 percent from disorders of the endocrine glands, nutrition and metabolism; 3.16 percent from problems linked to the nervous system and sensory organs; 0.45 percent from problems of the genito-urinary apparatus; and 0.36 percent from accidents or abuse.

6362

CSO: 2187



# MENINGITIS DEATHS REPORTED IN RIO IN LAST 35 DAYS

Rio de Janeiro O GLOBO in Portuguese 5 Aug 81 p 12

[Excerpt] Waldir Travares, director of the Sao Sebastiao State Hospital, reported yesterday that 105 meningitis cases had been interned in the hospital in July, with 30 deaths. This month seven people have been admitted with various types of meningitis, and two have died. According to Travares, it is normal to register 120 meningitis cases per month; 10 percent of these are meningococcic meningitis.

Also yesterday, the Medical Association of Rio de Janeiro released an anonymous letter, received on 2 June by Roberto Chabo, president of the association, in which a physician claimed there was a serious meningitis epidemic, provoked by salmonella bacteria originating in nursing homes and hospitals, mainly in Lower Fluminense.

## Endorsement

According to the anonymous informant, the outbreak was detected in the Sao Sebastiao State Hospital in the last 6 months. Vivaldo Lima Sobrinho, coordinate of the association's Community Health Department, said he had telephoned a "key figure, a physician at Sao Sebastiao whose identity is still secret, who confirmed an increase in cases of meningitis caused by salmonella, all originating in Lower Fluminense hospitals."

Vivaldo continued: "The association backs the letter's claim regarding the increase in cases. The doctor who confirmed it to us is completely trustworthy. We do not subscribe to the assertion, also contained in the letter, that the mortality rate is 100 percent."

Sobrinho explained that the association had not released the letter earlier because it backs away from endorsing anonymous accusations. However, after the newspaper reports and the confirmation by the Sao Sebastiao physician, the situation has changed.

## Theories

This afternoon the association will call together specialists in parasitic infectious diseases in the Sao Sebastiao, University and Pedro Ernesto hospitals and the National School of Public Health. The purpose of the meeting is to evaluate the meningitis cases from data collected at these hospitals.

Food contamination or hospital infections are the possibilities suggested by the association to explain the occurrence of salmonella-provoked meningitis. The hospitals named in the letter are: Nossa Senhora das Vitorias, in Nova Iguaçu; Iraja Nursing Home; Children's Hospital of Caxias; Santa Cecilia Nursing Home in Caxias; Somicol, in Caxias; Prontonil, in Nova Iguaçu; Falhaber Nursing Home; and the Municipal Hospital of Mage.

According to Vivaldo Sobrinho, salmonella-related meningitis is rare, although the bacterium is common, proliferating in feces and contaminated food. Although it is not resistant, salmonella causes a particularly virulent meningitis.

The coordinator of the association's Community Health Department added that the "key figure" at the São Sebastião Hospital said that some people are being treated for meningococcal meningitis, but there are no "characteristics of an epidemic."

#### Letter

The anonymous letter states: "As the first precaution, the State Secretariat of Health alerted the Ministry of Health and notified INAMPS [National Institute for Social Security Medical Assistance] of the hospitals where the salmonella-related meningitis may have originated." It adds: "The Municipal Health Secretariat was notified so that a joint federal, state and municipal effort could be made to keep the epidemic from spreading, once the foci of infection are identified."

Asserting that "no further measures have yet been taken," the complaining letter says: "The INPS [National Social Security Institute] continues to issue internment permits for these hospitals. Influential politicians constantly intervene in the medical area in defense of the economic interests of these establishments, and it is public knowledge that an influential regional director of the IMPA is the proprietor of one of these pestholes in Lower Fluminense, the recent target of an expose by doctors on a TV Globo program."

6362

CSO: 5400/2187

## BRIEFS

**YELLOW FEVER IN RECIFE**--Recife--With the discovery of some yellow fever foci in Grande Recife, a team of health officers from SUCAM [Superintendency of Public Health Campaigns], an agency of the Health Ministry, went into action, conducting a sweep of an extensive marshy area in the city of Olinda and exterminating the *Aedes Aegypti* mosquitoes that carry the disease. Antonio Pascoal, an Olinda councilman, complained that SUCAM had not given enough attention to the problem. The councilman says that the districts of Casa Casada, Jardim Atlantica and Rio Doci have the greatest incidence of mosquitoes. The Health Ministry agency confirmed the presence of foci. To combat them, SUCAM mobilized 70 health officers in the affected areas, including the districts of Prazeres and Curado, south of Recife, which also had some mosquito foci. [Excerpts] [Brasilia CORREIO BRAZILIENSE in Portuguese 30 Jul 81 p 8] 6362

**TYPHOID FEVER IN BAHIA**--Salvador--An outbreak of typhoid fever in the area of Ribeirao de Santa Luzia, Buerarema Municipio, 596 km from this city, was confirmed yesterday by Paulo Roberto Kruschewsky, director of the Fourth Regional Directorate of Health. Some 30 cases of typhoid have already been recorded, with one fatality. The victim, farm worker Antonio Firmino de Silva, died last Friday at Santa Cruz Hospital in Itabuna, where 10 typhoid victims are still interned. A team of health officers has been sent to the area to vaccinate the population and to collect water samples from the creeks and streams in an effort to locate the focus. [Text] [Rio de Janeiro JORNAL DO BRASIL in Portuguese 5 Aug 81 p 8] 6362

CSO: 5400/2187

## BRIEFS

**TYPHOID VACCINATION CAMPAIGN**--One hundred twenty thousand school children in the northern sector of the metropolitan area will be vaccinated against typhoid fever this month. The doses will be administered in capsules, a recent discovery which, according to experts, will give 100 percent protection against this infectious disease. According to information released by the Ministry of Health, the vaccine which is now being sold in Europe at a cost of \$9.00 was administered to 330 Santiago students in 1980 with excellent results. The secretariat of state added that the northern sector of the metropolitan area was selected because it has the greatest number of typhoid fever cases. What is more, it maintains good coordination between health and education through committees which operate in all of the ministry's consulting rooms. It was also explained that authorization of parents will be requested to administer the vaccine, thus complying with a requirement imposed by the World Health Organization and the Pan-American Health Organization, entities which by sponsoring immunization are collaborating in controlling a high frequency disease. [Text] [Santiago EL MERCURIO in Spanish 10 Aug 81 p C-5] 8143

CSO: 5400/2190

## BRIEFS

DENGUE CASES DECREASE--For the second straight day, less than 1,000 cases of dengue a day have been reported in the country, an encouraging sign if we compare this figure to previous ones. This is the result of the sustained effort of thousands of men and women working in the health services and of the population in general. This reduction in dengue cases does not mean that we can lower our guard. On the contrary, there can be no greater encouragement than this result at this point for us to intensify our work in all fronts and attain the higher objective we have set for ourselves: to eliminate the epidemic and eradicate its vector. [Text] [FL221348 Havana Domestic Service in Spanish 1045 GMT 22 Aug 81]

CSO: 5400/2185

## BRIEFS

ONGOING VACCINATION CAMPAIGN--The Port-Gentil endemic diseases service launched a vast vaccination campaign last March that will end next November. The campaign will cover the entire Ogooue-Maritime province. The 6-member health team, headed by Bernard-Auguste Moussavou, has already vaccinated the people of the Ndogou department, those along the Ogooue River and in the Anengue Lake area. Since 18 June, the team has been working in the community of Port-Gentil and the department of the Bendje. The last place to be visited will be the Etimboue department. During the campaign, the health technicians are administering vaccinations against tetanus, tuberculosis--with BCG vaccine--yellow fever and smallpox. This last is optional, since the smallpox scourge has reportedly been eradicated. It should be noted that the campaign is only aimed at adults and school-age children. Younger children are covered by the enlarged vaccination program. The campaign, according to Bernard-August Moussavou, is not without problems. First, the people are not informed about it, both in the urban areas and the departments, and secondly, it is very difficult to preserve the vaccines, since the team has no refrigeration facilities during their tour. [Text] [Libreville L'UNION in French 15-18 Aug 81 p 3]

CSO: 5400/5248

BRIEFS

USSR POLIO VACCINE DONATION—Last Thursday our government was the recipient of 50,000 doses of polio vaccine, offered by the USSR Red Cross. Another 100,000 doses promised by the Soviet Union will arrive shortly. It is recalled that this vaccine is in short supply in Guinea-Bissau, at a time when an outbreak of infantile paralysis is detected throughout the country, an indication that the virus is in an active phase and should be combated without delay. The Ministry of Health is very concerned with the situation and will launch a massive vaccination campaign, now that part of the vaccine has arrived. [Excerpt] [Bissau NO PINTCHA in Portuguese 18 Jul 81 p 8]

CSO: 5400/5246



## BRIEFS

**VACCINE AVAILABILITY**--Mayor of Linden, Ashton Alleyne, has urged Guyanese to take advantage of the several vaccines available to get themselves inoculated against infectious diseases. The diseases which are hitting the Caribbean and for which vaccines are available freely from the Guyana medical services are tuberculosis, diphtheria, tetanus, poliomyelitis, whooping cough and measles. The Mayor has urged parents to ensure that every child is fully immunized with these vaccines. Cde. Alleyne also reminded parents that pre-school clinics are held on the fourth Wednesday of every month at Mackenzie Health Centre and Wismar Health Station. At Christianburg Health Station they are conducted on the second Tuesday of every month. He pointed out that unless children are fully immunized they will not be permitted to enroll at nursery schools. [Text] [Georgetown GUYANA CHRONICLE in English 5 Aug 81 p 10]

**SPRAYING OF SHIPS**--Fogging operations are now being conducted on ships entering Guyana in an effort to avoid an outbreak of dengue fever here. The fever has already affected several Caribbean countries. There have also been reports of the disease in this country but according to a Ministry of Health official these were still to be confirmed. However, persons suspected of suffering from dengue have been subjected to laboratory tests. Results are being awaited. Meanwhile fogging is continuing in Kitty and Bourda and at Nandy Park on the East Bank of Demerara, part of an operation to rid the city of mosquitoes, particularly the *Aedes-aegypti* species, the dengue fever carrier. The City Council is also working in collaboration with the Ministry of Health in an oiling operation aimed at controlling mosquitoes in the city. Oiling of the drains is now being done in Kitty. [Text] [Georgetown GUYANA CHRONICLE in English 7 Aug 81 8-9]

**OCCUPATIONAL HEALTH CONCERN**--The Ministry of Health has established an occupational health and safety unit to help improve the working environment, particularly in the industrial sector. The activities of the unit are to be coordinated by the Principal Medical Officer, Dr. E. H. London. Cde Albert Parris has been appointed Health Inspector of the unit. Among the primary activities planned for the unit is an occupational health programme intended to inform both management and workers of areas of improvement in work environments, aimed at safeguarding workers. The education programme will also include the training of para-medical and safety workers in industrial concerns. Workers will also be brought up-to-date on the latest methods of protection. [Text] [Georgetown GUYANA CHRONICLE in English 8 Aug 81 p 3]



NEW CLEAN-UP CAMPAIGN--Georgetown Mayor Mavis Benn yesterday told citizens that irrespective of what part of the city in which they reside, it was their duty to become involved in the 'clean up campaign' which will officially begin on August 15. In launching the second clean-up campaign for this year, the Mayor referred to the Council's financial constraints and its inability to find workers to do certain types of jobs. That made it necessary to approach the citizens so often for help, she explained. She told the Town Hall audience at the launching ceremony that the Council hopes the frequent campaigns will motivate the citizenry of Georgetown to be involved in constant clean-up exercises so that Georgetown would remain the Garden City. In support of her contention that all should become involved, the Mayor explained that in the event of an epidemic the entire city would be affected. Meanwhile, the Ministry of Environment and Water Supply is to co-ordinate the cleaning of all the drainage canals in Georgetown to improve the environment in the city. It is hoped, too, to set up scientific unit within the Ministry to deal with environmental problems. Already the Ministry has designed a new type of dustbin incinerator which is being recommended to householders for use. Its usage would be explained to the public shortly, Cde Harry said, as he called for the cooperation of the media in executing the Ministry's functions. [Excerpts] [Georgetown SUNDAY CHRONICLE 9 Aug 81 pp 1, 24]

CSO: 5400/7572

## GOVERNMENTAL EFFORTS IN FIGHT AGAINST LEPROSY TOLD

New Delhi PATRIOT in English 28 Jul 81 p 5

[Text]

INDIA has the largest number of leprosy patients in the world, roughly 32,50,000. India, in fact, has one-quarter of the world's total leprosy patient population.

The official figures, however, are considered to be much lower than the actual number. According to World Health Organisation findings, "the data on the prevalence of leprosy in most countries are unreliable, the numbers of registered cases are consequently too low".

Within the country itself, high prevalence rates are found in the States of Tamil Nadu, Andhra Pradesh, Orissa and West Bengal. About 40 crore people are living in areas endemic for leprosy and are thus exposed to the risk of infection.

The disease remains untamed. The overall prevalence rate is six per 1000. About four lakh new cases develop every year and about three lakh cases are eliminated either due to cure or death.

## SOCIAL STIGMA

The reasons why the disease is looked upon with great horror is because of the social stigma attached to it. Though there is no reason to treat the leprosy patient as an outcast, Indian Council of Medical Research director-general Dr V. Ramalingaswamy explains: "It is no more infectious and contagious than many other diseases, and detected early, is completely curable. The treatment of course is long-lasting over a period between five and 10 years".

With drugs available, leprosy can be cured and the rate of infection brought down. Once an early diagnosis is made, a qualified physician need no longer be

in attendance thereafter. The treatment can be continued in the home of the patient by a paramedical or community health worker.

The first prerequisite, experts stress, for any leprosy control programme is early detection of the disease, to be followed up by regular treatment—regularity of treatment is vital. In a few years the patient is rendered non-infective, development of the disease is arrested and he can go back to work and eventually get assimilated in society.

## RESEARCH

Research is going on in the country to develop an antileprosy vaccine. The Indian Cancer Research Centre in Bombay and the AI India Institute of Medical Sciences in Delhi are working on it. Both the vaccines are in early stages of development.

A vaccine can build up the resistance of a person so that he is able to overcome the disease much more quickly than is possible at present. It can also give the person who does not have the disease at present but who might get it if he were living in an endemic area, protection against potential danger.

The ICRC and the AIIMS vaccines are still in the experimental stage. They have been tested on a limited scale and their findings need to be more firmly establishing through tests on a much larger number of subjects. But the results appear promising.

So says Dr Ramalingaswamy what the Indian Council of Medical Research is doing is that it is setting up carefully-controlled studies in different parts of the country to identify and establish

the effects of these two vaccines. The results of these two enlarged studies are expected to take at least a year or year-and-a-half.

The World Health Organisation too is working on a vaccine made of human leprosy bacillus. It is injected into an animal known as armadillo, a mammal in Brazil. It is the only animal in which the leprosy bacillus is found to grow. The vaccine is being tested and is still in the research stage.

Any vaccine, cautions Dr Ramalingaswamy is still in the future. "We should not therefore relax or slow down efforts in the direction of leprosy control (with the funds presently at disposal)."

India, incidentally has a well designed leprosy control programme but the major problem with the programme say experts has been one of effective implementation.

Early detection of leprosy so vital for the control programme, is not a very difficult task. There are signs that can be understood by both the lay person and the paramedical worker.

A skin patch may develop; it may lose its colour or sensation in the area may be lost. This is the stage when the doctor must be immediately consulted because the symptoms may not necessarily be those of leprosy but of other conditions. But a trained doctor will be able to establish a definitive diagnosis through tests and other methods.

Leprosy, however cannot be cured in the advanced stages. Drugs can then only arrest further development and alleviate to a degree the sufferings of the patient.

## INSTITUTE REPORT AFFIRMS 'LOCAL CHOLERA EPIDEMIC'

Calcutta THE STATESMAN in English 1 Aug 81 p 7

[Text]

A thorough investigation by the National Institute of Cholera and Enteric Diseases into the recent outbreaks in the Tiljala area of 24 Parganas has revealed that there had been a "localized cholera epidemic." An official source of the institute said on Friday that contaminated water was the cause of the epidemic. The Institute was likely to submit its report to the West Bengal Government shortly, the source added.

The source said that doctors of the institute had made a door-to-door inquiry and examined about 30% of the total population in the area. There were about 55,000 people in block No. 69. Though the doctors made no distinction between gastro-enteritis, cholera and diarrhoea, they said that the proportion of positive cholera cases was very high. In terms of medical treatment and prevention, cholera was just one type of gastro-enteritis, they added.

Statistics collected from the Infectious Diseases Hospital, Calcutta, showed that about one-third of the total number of cases admitted to the hospital from the Calcutta Corporation area were from No. 69 block. Though cholera and gastro-enteritis attacks in this block were reported throughout the year, there had not been such largescale attacks in such a short period.

The disease was rampant for about 10 days only, during which, on an average, at least 15 patients were admitted to the ID hospital every day from this particular area report observed. Moreover, only the severe and acute cases were taken to hospital while moderate and mild attacks were treated at home, the official said. It had been noticed that only about one-eighth of the total number of affected people were usually treated at hospital. The outbreak at Tiljala was no exception in this regard, the source said.

There was "gross contamination of water sources in the Tiljala area, the report said. In most cases, the carrier was water. As such, the institute examined as many as 100 water samples. These were collected from all kinds of

water sources used by the people in the area, like ponds, hand pumps, water reservoirs at different houses, and tubewells. Most of the results were unsatisfactory.

The report also said that environmental sanitation in the area was "extremely poor." Though the people denied having taken water from these sources, there was every possibility of drinking water sources getting contaminated during the rains due to poor sanitation, the source said. During the rains, water accumulated and the people virtually "moved through sewers" he said.

Asked why the disease did not spread to adjacent areas, the source said that Eltor cholera, as differentiated from classical cholera, had less potential for spreading. A number of steps had been suggested in the report to check the disease in the area. Improvement of the water supply system and environmental sanitation were the two most important suggestions, the source said.

A group of Congress (I) supporters and members demonstrated at the Central Municipal Building on Friday and demanded an inquiry into the failure of the Calcutta Corporation's Health Department to check the spread of cholera and malaria in the city.

As the Health Officer was not present in the office at the time, a six-member deputation met the Commissioner and submitted a memorandum. A Calcutta Corporation spokesman said that the memorandum included demands for adequate steps to combat the spread of cholera and malaria, and clearance of garbage from different parts of the city in the morning and afternoon.

## JAUNDICE CASES REPORTED AMONG BOMBAY WORKERS

Bombay THE TIMES OF INDIA in English 4 Aug 81 p 3

[Text]

BOMBAY, August 2: Nearly 460 cases of jaundice have been reported at Central Railway's Byculla hospital in July. The figure was 75 in May, it shot up to 219 in June and touched 460 last month, according to the railway officials today.

The cases registered in the hospital are mainly confined to the Bombay division and according to unofficial sources the water served in the railway canteens might have been contaminated. This is, however, disputed by the railway management who point out that the employees could have contracted the disease elsewhere, "not necessarily in the railway canteens."

There were only a few cases of jaundice reported by the Western Railway — the exact figure was not available. Air-India and Indian Airlines also stated that the number of employees who were down with jaundice had not touched alarming proportions. "There were the usual few cases but it had in no way affected the working of the airline" was the reply from representatives of both the airlines.

Inquiries with some of the well-known business houses like Premier Automobiles, Sandoz, Mafatlal's and Podar showed that there were only a few cases of jaundice.

## CANTEN CONDITION

Labour leaders of some of the industrial establishments scattered in the Thane-Balapur region said that there

were quite a few jaundice cases in their units. "The condition of the canteen is appalling and the quality of the food served is awful", one of the leaders remarked. But this was denied by a factory officer.

Dr. Ravi Dastur, who is connected with different firms and factories, said that these were "sporadic cases" of jaundice in various industrial establishments. Inquiries made with some of the private medical practitioners in the Parel-Lalbaug area showed that they were regularly treating some of the employees working in nearby mills, for jaundice.

The municipal commissioner, Mr. D. M. Sukthankar, denied reports appearing in a section of the press that there was a jaundice epidemic in the city. "In fact the figure was much lower than it was last year", he told this reporter.

The municipal commissioner further said that the fall in the lake levels during the beginning of June had not resulted in an outbreak of jaundice epidemic in the city.

A few jaundice-affected patients interviewed by this reporter complained that the doctors had initially treated them. The general complaint was that some of the well-known medical practitioners attached to some of the top hospitals diagnosed the disease wrongly and sent their patients from one clinic to another for a variety of tests, the charges for which were exorbitant.

CSO: 5400/7125

## KALA-AZAR REPORTED SPREADING IN WEST BENGAL

Calcutta SUNDAY THE STATESMAN in English 26 Jul 81 p 3

[Text] **MR Nani Bhattacharyya**, West

Bengal's Health Minister said in Calcutta on Saturday that kala-azar had taken an endemic form in Malda and Murshidabad. The disease was spreading fast from Katihar and Purnea districts in Bihar on the West Bengal-Bihar border to central areas of West Bengal, he said, while inaugurating an inter-State conference on kala-azar at the School of Tropical Medicine. Dr A. B. Chowdhury, director of the school, warned that unless immediate steps were taken to prevent the spread of the disease, it would spell disaster in both the States.

Mr Bhattacharyya said that the disease had attacked 7,000 people in Bihar during the first half of the current year and taken a toll of 18 lives. In West Bengal, of the 401 victims of the disease this year, four died. The disease had "engulfed" two blocks in Malda and six blocks in Murshidabad. The latest victims were from Khardah in 24 Parganas, about 20 km from Calcutta, where 64 cases were reported so far.

The Minister said that since last year, 68 villages in Malda had recorded 309 kala-azar cases, while during the same period in 118 villages in Murshidabad 300 people had been afflicted by the disease.

He stressed the need for periodic reviews of the disease jointly by West Bengal and Bihar and overall coordination of the programme for eradication of the disease by the Union Government.

Dr Chowdhury, who presided over the scientific session of the

conference, said that the health workers of the two States should simultaneously undertake programmes for spraying DDT in the affected areas. The conference resolved that West Bengal and Bihar should exchange official reports on the

disease and measures for its eradication. The School of Tropical Medicine had started an intensive training of health workers in a kala-azar eradication programme. The school issued a circular to all primary health centres in the State on the logistics of kala-azar treatment.

Dr S. Pattanayak, Director, National Malaria Eradication Programme, Dr D. C. Roy, Regional Director of the Union Health Ministry, and Dr Srivastava, Chief Malaria Eradication Officer, Bihar Government, were among those who participated in the conference.

## BRIEFS

DEATHS FROM MEASLES--Jagdalpur (Bastar), July 26 (UNI)--At least 100 persons have died of measles and chicken pox in Jagargunda thana in tribal district of Bastar, according to a team of experts of Raipur Medical College, who visited the affected areas. They told UNI that chicken pox had assumed an epidemic form. Dr Niraj Thacker, specially appointed by the Madhya Pradesh Government to verify the reports of deaths and to suggest remedial measures, said he had gathered enough statistics to corroborate the deaths. [Text] [New Delhi PATRIOT in English 7 Jul 81 p 8]

CONJUNCTIVITIS IN RAJASTHAN--Jaipur, July 27 (PTI)--Conjunctivitis has broken out in an epidemic form in parts of Rajasthan. More than 50 per cent of the population in Jaipur district is suffering from the disease. He said a massive drive to control the disease was on and eyedrops were being supplied free of charge. A Medical and Health Department spokesman said the disease came from the adjoining UP and Delhi areas. He said a massive drive to control the disease was on and eye drops were being supplied free of charge. [Text] [New Delhi PATRIOT in English 28 Jul 81 p 4]

CHOLERA AT JADAVPORE--Mr Prasanta Sur, Minister for Local Government, said in Calcutta on Tuesday that a few cholera attacks had been reported in the Jadavpur municipal area. He said that he had held a meeting with the Health Minister, Mr Nani Bhattacharya, during the day to find out ways to prevent proliferation of the disease. Mr Sur said that the State Health Department had sent 20,000 cholera vaccines and a large quantity of disinfectant to the Jadavpur municipal authorities. He added that the Government had assured the municipal authorities of all kinds of help to control the disease. [Text] [Calcutta THE STATESMAN in English 29 Jul 81 p 7]

CHOLERA, GASTROENTERITIS, MALARIA--A total of 225 cholera and gastro-enteritis cases have been reported so far in the Calcutta Corporation area this month. Of these 10 have died. The West Bengal Health Minister, Mr Nani Bhattacharya said in Calcutta on Wednesday that in the Jadavpur-Santoshpur area, another 43 suspected cholera cases were taken to hospitals. Three of them died later. The first cholera case was reported in the area on July 5 and the last on July 20. The Minister said that the Health Department had taken adequate steps to prevent the disease from spreading to the neighbouring areas. Mr Anil Krishna Roy, Commissioner, Calcutta Corporation, said on Wednesday that about 1,500 cases of malaria had been recorded in the city since the beginning of April this year. [Text] [Calcutta THE STATESMAN in English 30 Jul 81 p 3]



**CHOLERA IN NASIK**--Nasik, July 31 (PTI and UNI)--The collector of Nasik, Mr Govind Swarup, has notified the whole of Niphad and Sinner talukas and the Sinner municipal area as cholera-affected. He appointed the block development officer of Niphad and the chief officer of the Sinner municipality, as special cholera control officers. Precautionary measures were being taken to combat the epidemic, following the detection of one case of cholera in Gondegaon in Niphad taluka, it was stated here today. [Text] [Bombay THE TIMES OF INDIA in English 1 Aug 81 p 14]

**GASTROENTERITIS SCARE**--Raipur, August 5: Bhilai and its surrounding areas have been declared an epidemic area following seven gastro-enteritis deaths. Nearly 100 seizures were reported by different hospitals in the area. A massive anti-cholera and mass inoculation campaign has been launched by the public health department. [Text] [Bombay THE TIMES OF INDIA in English 6 Aug 81 p 3]

**BOMBAY JAUNDICE DEATHS**--Bombay, August 10: Forty-five deaths due to jaundice were recorded in Greater Bombay during July, the municipal commissioner, Mr. D. M. Sukthankar, told councillors here today. Replying to a question, he admitted that the incidence of jaundice was rising and said the monsoon months usually registered the largest number of cases. [Text] [Bombay THE TIMES OF INDIA in English 11 Aug 81 p 4]

**GASTROENTERITIS, CHOLERA IN CALCUTTA**--A spokesman of Calcutta Corporation's Health Department said in Calcutta on Tuesday that in the past week 96 patients suspected to be suffering from gastro-enteritis had been admitted to hospital. In the corresponding week last year, 69 gastro-enteritis attacks had been registered. He said cholera attacks in the city were on the wane and only one attack had been reported from the Infectious Disease hospital last week. The sick person had been brought from the Bondel Road area. There had been six cholera attacks in the corresponding week last year. [Text] [Calcutta THE STATESMAN in English 12 Aug 81 p 1]

CSO: 5400/7131

## BRIEFS

CHOLERA CASES--Another four cases of cholera were diagnosed today in Gaza, according to the spokeswoman of the Health Ministry. Stricken were two 18-year-old women, a 45-year-old man and an infant--all of them having ties with visitors to Gaza from Jordan. To date, 11 cholera victims have been confirmed in Gaza. A total of 18 cases have been diagnosed including 7 in Judaea and Samaria. The Health Ministry again advises the public not to purchase fruits and vegetables from unknown sources and to wash fruits and vegetables well. [Text] [TA161901 Tel Aviv ITIM in Hebrew 1630 GMT 16 Aug 81]

CSO: 5400/4753



STUDY DETERMINES DEGREE OF HUMAN CONTAMINATION THROUGH RATS

Maputo NOTICIAS in Portuguese 8 Aug 81 p 3

[Text] A study to determine the degree of contamination through rats is being conducted in three areas of the city of Maputo: Porto, Lixeira and the Xipamanine district. The study is being carried out by the ecology study group of the Ministry of Health.

The study is principally aimed at determining the proportion of the animals acting as vectors or as repositories of diseases affecting man, such as bubonic plague.

Data obtained by the ecology study group indicate that in 1976, the geographic distribution of the number of rate species in Mozambique was highest in the provinces of Manica, Sofala and Tete, and lowest in the regions of Niassa and Cabo Delgado.

This study group was formed last year in order to provide support for environmental sanitation programs, to carry out studies aimed at identifying environmental pollution problems and to determine the destruction of natural resources through the actions of industrial and agricultural complexes already in existence.

This group is also charged with the responsibility of introducing legislation for the protection of man and the environment in relation to the various types of activity, as well as ecological problems.

According to a report of a group of WHO scientists issued in 1974, there are 30 species of rats that are carriers of various diseases. Among them are the "grecitidae," the "morinae" and the "gerbillinae" families, which are known to exist in Mozambique.

The diseases most commonly transmitted through rats are brucellosis, tuberculosis, bubonic plague and others.

A source close to this group indicated that the study has received excellent co-operation from the people living in the Xipamanine district, who are catching about 300 rats daily in traps distributed throughout the area.

CSO: 5400/5242

## BRIEFS

MEASLES CASES--A number of measles cases have been detected in Machaze in the district of Sussundenga, province of Manica, sources close to the Manica provincial health services directorate have stated. These sources added that most of the measles cases occurred in the area of "Chihuji," but provided no other information on this subject. [Text] [Beira NOTICIAS DA BEIRA in Portuguese 7 Aug 81 p 2]

MEASLES DEATHS--A vaccination campaign will open next Sunday 26 July to combat the measles outbreak in Beira, which has already caused 260 deaths. The vaccination will be given to all children 6 months to 5 years of age in various centers throughout the city. The city's health director, Dr Clementina Antonio stated that the rate of mortality caused by measles is quite high, with 156 deaths registered from January to June in the hospital and 104 deaths in victims' residences. Dr Clementina Antonio said that vaccination against the disease has not proved effective, since it included only children 9 months to 3 years of age. [Excerpts] [Beira NOTICIAS DA BEIRA in Portuguese 23 Jul 81 p 3]

MALARIA CHEMO-PROPHYLAXIS--The student health section of the Beira health services directorate in the province of Sofala is controlling at present 50 primary and secondary schools in regard to malaria chemo-prophylaxis and the application of anti-tetanus vaccines; in the preventive campaign against malaria, more than 3,030 children and young adults have been taking chloroquine pills distributed to these educational centers last June. However, we have learned that these figures do not correspond to the objectives established in the student health plan, because some of these educational centers have neglected to prepare statistics. This is of particular concern to the health services directorate, because it cannot determine as yet the exact needs of each educational institution in chloroquine pills. Malaria chemo-prophylaxis in schools, consisting of the weekly distribution of chloroquine pills to students is a permanent operation conducted throughout the city; however, it was intensified beginning last month with the inspection of 37 institutions. [Text] [Beira NOTICIAS DA BEIRA in Portuguese 5 Jul 81 p 2]

CSO: 5400

BRIEFS

MALARIA EPIDEMIC RAGES--New Delhi, Aug. 12: Malaria has broken out in an epidemic form in parts of the flood-ravaged Uttar Pradesh state, reports AFP. Reports yesterday said six children died of the disease in two villages in Mathura district, about 120 km south of New Delhi, in the past three days. About 800 families have been affected by the epidemic in the water logged villages, the report said.  
[Text] [Kathmandu THE RISING NEPAL in English 12 Aug 81 p 5]

CSO: 5400/4958

## BRIEFS

CONFERENCE ON TSETSE FLIES--The first national conference on tsetse-flies and trypanosomiasis (sleeping sickness) of man and animals will be held on Monday at the Murtala Muhammed Square Conference Hall, Kaduna. The conference will be declared open by the Minister of Science and Technology, Dr. Sylvester U. Ugoh. The conference will review among other things previous efforts at controlling tsetse-flies and trypanosomiasis of man and animals and identify gaps that need to be filled in order to have a more effective control. Experts from Nigeria and from overseas including international organisations like Food and Agriculture Organisation (FAO), World Health Organisation (WHO), Scientific and Technical Research Council of the OAU, International Laboratory for Research on Animal Diseases (ILRAD), and International Livestock Centre for Africa (ILCA) are expected to attend. Centre for Overseas Pest Control London (COPC) is expected also to present position papers. Topics to be covered will include tsetse biology and ecology, tsetse control, animal trypanosomiasis, human trypanosomiasis (sleeping sickness), chemotherapy and chemoprophylaxis, immunology, immunisation and trypanotolerance, socio-cultural and socio-economic aspects of tsetse-flies and trypanosomiasis control, land use and rural development in relation to tsetse and trypanosomiasis control and regional co-operation. About 250 workers in the field of trypanosomiasis and related development are expected to attend. [Text] [Kaduna NEW NIGERIAN in English 8 Aug 81 p 16]

CSO: 5400/5244 .

PEOPLES REPUBLIC OF CHINA

BRIEFS

RESURGENCE OF TYPHOID--Beijing, Aug. 8: China, virtually rid of typhoid after the Communist takeover in 1949, has been facing a disturbing resurgence of the disease over the past two years, the Workers' Daily warned today, reports AFP. The organ of Chinese organized labour did not provide any statistics on the number of cases recorded. But it called on the nation to give nigher priority to hygiene and sanitation. [Text] [Kathmandu THE RISING NEPAL in English 9 Aug 81 pp 1, 6]

CSO: 5400/4958

CHOLERA CASES REPORTED

Manila BULLETIN TODAY in English 12 Aug 81 p 32

[Text] Health Minister Jesus C. Azurin ordered a team of doctors yesterday to bring vaccines and medicines to Lapinig, Bohol, where 40 people reportedly have died of cholera el tor.

The medical team was directed by Azurin to reconfirm the diagnosis of these deaths.

To prevent complications caused by gastro-enteritis and cholera el tor, the health minister ordered the free distribution of Oresol, an oral rehydrating medicine to the rural areas.

Meanwhile, Azurin stressed that the government should not be solely responsible for the maintenance of the people's health.

This was in response to the denouncement of an alliance of various consumer groups regarding the health ministry's statement that the reported number of deaths due to gastroenteritis is "not unusual."

"We (MOH) do not deny our responsibility in providing clean water and nutrition to the people. But this is a joint responsibility of the ministry with the agriculture ministry and the nutrition program," Azurin said.

"Also we are asking the citizens to share in the prevention of infectious diseases that is usually triggered by negligence," he added.

Azurin emphasized again that the 57 deaths due to gastro-enteritis reported last week is "not too alarming" since the cases brought to the hospital were already at a critical stage.

If these people were brought to the hospital immediately for treatment, no deaths could have occurred, he said.

He added that the incidence of gastro-enteritis and cholera el tor is expected to increase from June to December.

The public is advised to keep water containers clean, handle and cook food properly, and see the doctor immediately when one vomits and develops diarrhea. (Ma-develops diarrhea, (Marcia C. Rodriguez)

CSO: 5400/4958

SOLAR-HEATING CURBS DISEASES

Manila BULLETIN TODAY in English 18 Aug 81 p 17

[Text] The use of solar energy to heat water for industrial, commercial and domestic use will help prevent the spread of diseases caused by water-borne bacteria or viruses.

Remigio L. Wan, president of Somerville Stainless Steel Corp. and Economic Energy Systems, Inc. (EESI), made the warning in the wake of reports of increasing incidence of cholera, el tor and gastro-enteritis.

According to Wan, water can be heated up to 95 degrees centigrade by merely using sunlight as energy source has sanitizing effect on water thus making it safe and healthful for any kind of use.

Industrial, domestic and commercial users of solar hot water systems such as hotels, and restaurants can therefore be ensured of safe water for cleaning, washing or drinking purposes at the least possible cost since solar heaters cut down electricity cost by 95 per cent.

CSO: 3400/4958

## BRIEFS

CHOLERA OUTBREAK DENIED--"It is not cholera; merely gastroenteritis," Austria's diplomatic representatives in Romania declared on Wednesday in a teletype message to KURIER. FRG newspapers had played up reports on an alleged cholera epidemic on the Romanian Black Sea coast at Mamaia and Constanta in which five people were said to have died. Actually no one has confirmed the reports of these deaths--including returning tourists, who merely complain about an "ugly diarrhea." FRG newspapers reported thousands of persons taken ill. According to reports by tourists, the epidemic is already under control: Romanian health authorities have disinfected some areas on the Black Sea coast, they declare. [Text] [AU271234 Vienna KURIER in German 27 Aug 81 p 13]

CSO: 5400/2194



PROVISIONS OF NEW ACT IN ANTI-LITTER CAMPAIGN PUBLISHED

[Editorial Report] The Trinidad and Tobago Ministry of Health and Environment, in a full-page advertisement in the 7 August 1981 TRINIDAD GUARDIAN, page 24, announces the following provisions of the new amended anti-litter act:

"The Ministry of Health and Environment wishes to notify the public that the amended Litter Act will be proclaimed on Friday 7th August 1981. The Public is asked to take note and to comply with the following provisions of the Act.

"1. It is illegal to deposit litter in a public place except in a receptacle placed for the purpose of collecting it or at an approved site.

Penalties--Individuals--Fine of \$1,000 or six months imprisonment.  
Companies--Fine of \$2,000.

"2. It is illegal to throw litter from a vehicle. If it cannot be determined which occupant of the vehicle is responsible, the driver will be held responsible. If it is impossible to stop the vehicle, the owner will be held responsible.

Penalties--Individuals--Fine of \$1,000 or six months imprisonment.  
Companies--Fine of \$2,000.

"3. Every bus or taxi must carry receptacles for the deposit of litter.

Penalty--Fine of \$500 for violation.

"4. Any material being carried on a truck, trailer or other motor vehicle must be sufficiently well secured or covered so that it cannot fall off or be blown off. Such materials include garbage, sand, gravel, stone tree cuttings, paper etc.

Penalties--Individuals--Fine of \$1,000 or six months imprisonment.  
Companies--Fine of \$2,000.

"5. Penalties for second and subsequent conviction: Double the above penalties.

"6. Any Public Authority may appoint any number of persons to be litter prevention wardens in any public place under the control of the Authority.

"7. The following persons are ex-officio litter prevention wardens.  
(a) Every member of the Police Service including the Special Reserve Police, City and Borough Police and every person to whom a precept has been issued;  
(b) Every Public Health Inspector;  
(c) Every Forest Officer;  
(d) Every harbour master;  
(e) All persons nominated by the Minister of Health and Environment.

"8. It is illegal to  
(a) Obstruct a litter prevention Warden;  
(b) Refuse to give name and address;  
(c) Give a false name or address;  
(d) Falsely pretend to be a warden;  
(e) Threaten, assault or use threatening language to a warden;  
(f) Offer or give a bribe to a warden.

Penalty--\$1,000.

"9. Any person who willfully tampers with a litter bin is liable to a fine of \$500.

"10. Tickets may be given by wardens for certain offences. Ticket fines--\$50.00

"Do not throw paper, cans, boxes, bottles, grass, tree cuttings, etc. on the streets or in any public place. Please use bins.

"Help us to be safe from diseases caused by littering on our roads, parks, drains, rivers etc.

"Help us to keep a clean scene.

"Cooperate with the Ministry of Health and Environment in keeping our country clean.

"Let us work together against litter.

Dr Eugene Laurent  
Principal Medical Officer  
(Environmental Health)

CSO: 5400/7570

BRIEFS

MOSQUITO SPRAYING PROBLEMS--For the programme to work effectively, containers had to be removed or properly protected, so that no water was allowed to collect and help in the breeding process of the mosquito. "It has been observed," the report stated, "that in many instances Governmental agencies are the delinquents in accumulating large numbers of containers capable of holding water e.g. WASA, PTSC, Fire and Police Services." Another factor hampering the programme's success was an inadequate pipe-borne water supply. Water was often stored on premises for domestic use, because of continuous interruptions in the supply. "The treatment effort," the report continued, "was made difficult by the fast turnover in drums, thus reducing residual life of the insecticide." Often too, the insecticide was removed, unknowingly, by people who constantly washed out their drums. The division has teams stationed at the airports, and wharves, carrying out inspections to see that there are no importations. [Excerpts] [Port-of-Spain TRINIDAD GUARDIAN in English 29 Jul 81 p 3]

CSO: 5400/7570

## TURKEY

### MALARIA OCCUPIES ATTENTION OF ADANA OFFICIALS

Adana YENI ADANA in Turkish 1, 2 Jul 81 pp 1, 5

[1 Jul 81 p 1]

[Text] The subject of malaria, which has been unpreventable in Adana and which has become a nightmare for the people here, was taken up yesterday at a meeting attended by foreign experts. At the meeting, which three specialists from the World Health Organization attended along with the general director of War on Malaria, Dr Utku Unsal, and the other concerned officials, the battle with malaria was discussed.

Along with the aforementioned specialists, officials from the Adana Municipality, the Health Directorate, Environmental Health and other interested institutions, participated in the meeting held at the Institute of Hygiene. At the meeting, Adana's problems, such as drinking water, sewerage and garbage were discussed and research aimed at finding comprehensive solutions for malaria, which is related to these three problems, was addressed.

Husamettin Esin, who provided information on behalf of the Adana Municipality to the specialists concerning garbage, drinking water and sewerage--the three main factors of the health matter--made the following points:

"In Adana, 2,500 liters of water per second are obtained from 56 wells. The fact that this network is 70 years old results in nearly 40 percent of this water being lost. There is chlorination equipment at only 20 of the wells but this is woefully insufficient. We are trying to collect the 1,000 tons of garbage the city produces per day using 40 vehicles. At present we are able to collect 700 tons of garbage per day. As the garbage is collected and incinerated the environment and the Seyhan river are being polluted. Albeit primitive, we are now burying the garbage in pits opened on It island."

After the presentation of the necessary preliminary information, the specialists conducted investigations in various neighborhoods including Kiremithane, Gunesli, Mutlu, Eski Baraj and Kanalkopru where malaria is prevalent.

In this connection, the statement was made that 9,000 cases of malaria have been seen in Adana since the beginning of the year and the public was asked to "become aware of the malaria problem, heed the tenets of cleanliness, and destroy the mosquito's breeding areas."

[Text] Dr Utku Unsal, the general director of War on Malaria who has been in Adana for some time now for research and investigations, said in an announcement that "the airborne attack on the mosquito conducted by the Adana Municipality will not produce the expected result because the nature of the pesticide to be used (malathion) is not consistent with the natural and geographic conditions of the area."

Dr Unsal stated that malaria is a disease which requires microscopic investigation and he added that "we have set up eight diagnostic stations in Adana. The number of blood samples taken has increased 30 percent compared to last year. Consequently, pruritis is decreasing. In this connection, let me emphasize right not that the airborne attack on mosquitos which the Adana Municipality conducted a few days ago went for naught.

I mean to say that it will not produce the expected result, it has been in vain. The type and content of the pesticide used in aerial spraying should be well chosen. The prospects of success for aerial spraying change according to how hot the weather is, wind and the times mosquitos are in the open. If an airplane is more than 100 meters away, there will be no effect. If one takes into consideration that there are many tall buildings in Adana the chances for success from aerial spraying are clear. The speed of the spraying aircraft is important as well. The pesticide sprayed from the aircraft should hang in the air for a certain length of time. The pesticide malathion, which the municipality is using in Adana, is ineffective. In any event the mosquitos in the city move inside and are found inside houses. From this standpoint aerial spraying of pesticides will not yield the desired result.

What's the Solution?

In response to a question, Dr Unsal made the following remarks concerning the most effective methods for fighting malaria and mosquitos.

"Aerial spraying of pesticides has a psychological effect in that it is a morale booster for the public. It creates the impression that the necessary steps are being taken. The most effective method against them though requires that the public be informed about malaria and mosquitos and that they try to prevent standing pools of water and the accumulation of garbage. To accomplish this the garbage heaps and standing pools, where the mosquito breeds, must be destroyed. In Adana the sources of malaria are the canals and standing pools in the river bank neighborhoods."

9236

CSO: 5400/5521

## BRIEFS

SLEEPING SICKNESS ERADICATION--The Minister of Health, Dr Ezra Nkwasiwe has stated that the eradication of sleeping sickness will be given top priority by the government because the situation worsened during the eight years of Amin's misrule. He was closing a conference of the World Health Organisation (WHO) planning and valuation committee on sleeping sickness emergency control programme at Jinja. Dr Nkwasiwe told the delegates that: Uganda had no choice but to fight tsetse flies and sleeping sickness because they have devastated enough of our livestock on farms and ranches. The minister disclosed that he had already appointed a special Medical Director on sleeping sickness to liaise with world agencies which will give external assistance to Uganda. Dr Nkwasiwe appealed for urgent material and financial support from the international community to embark on this emergency programme especially the rehabilitation of the Uganda Tripanosomiasis Research Organisation (UTRO). [Text] [Kampala UGANDA TIMES in English 28 Jul 81 p 3]

CSO: 5400/5244

## UNITED ARAB EMIRATES

### BRIEFS

OVER 2400 MALARIA CASES--The directorate of preventive medicine in the Ministry of Health has announced that 2,404 cases of malaria were detected and treated in the country during the first half of this year. Of these 214 cases were in Abu Dhabi, 620 in Al Ain, 353 in Dubai, 134 in Sharjah, 52 in Ajman, 28 in Umm Al Quwain, 207 in Ras Al Khaimah, 631 in the eastern coastal areas and 184 in the mountain region. The director of preventive medicine, Dr Abdul Wahab Al Muhaideb, will hold a meeting in Sharjah today with officials of the malaria eradication department to discuss measures to check the spread of the disease in the country. Dr Muhaideb will also hold a meeting in Sharjah with heads of the preventive medicine departments in the country to review steps taken to prevent outbreak of epidemic, with special emphasis on cholera. The meeting will also discuss measures to implement resolutions adopted by the Gulf Arab health council at its meeting in Kuwait last Monday. [Text] [Dubai KHALEEJ TIMES in English 17 Aug 81 p 3]

CSO: 5400/4754



DENGUE FEVER SAID TO BE DETECTED IN PETARE

Cases Remain Unsubstantiated

Caracas EL DIARIO DE CARACAS in Spanish 4 Aug 81 p 28

[Article by G. W.]

[Text] The editor of EL DIARIO DE CARACAS went to Petare for wool and came out sheared: he was informed of a possible epidemic or outbreak of mumps in Jose Felix Ribas District and it turned out that the cases detected are of the now well-known dengue.

In fact, the Health Committee of the Sucre District Municipal Council, chaired by Argelia Laya, has begun a fumigation campaign in that district to combat this common disease which, it appears, is causing havoc in Cuba.

Councilwoman Laya had no information about the alleged epidemic of mumps. She referred us to the committee's inspector, Pedro Alcala, but he, too, knew nothing about the affair.

Nor did Antonio Clemente, alderman in close contact with the districts, have any information about this infamous disease.

Nevertheless, fumigation is being stepped up in Jose Felix Ribas District to prevent dengue from spreading, since it has been positively detected.

A visit was also made to Program Unit No 5 of the Ministry of Health and Social Welfare in Sucre District, and, although its chairman, Alfonzo Ortiz, could not be reached, it was said that there was no information about any outbreak of mumps or dengue.

Argelia Laya said that a special program has been initiated in the Petare districts whereby, through the joint action of the council, the Ministry of Health and Social Welfare and the Metropolitan Institute for Urban Sanitation, steps are being taken to fumigate the area and exterminate rats.



## Cemeteries are Breeding Grounds

Caracas EL DAIRIO DE CARACAS in Spanish 30 Jul 81 p 26

[Article by Maria Teresa Arbelaez]

[Excertps] An exceptional study is being reviewed in this article on the dengue epidemic which is afflicting Cuba and threatening to spread to our country. The beautiful flowers which serve as homage to the deceased are the culture medium for the *Aedes aegypti*, the mosquito which transmits dengue and yellow fever.

Last week the Ministry of Health issued an alert with regard to dengue. This disease, which presently appears very remote for Venezuelans, is causing havoc in Cuba and other Caribbean islands.

This is an opportune moment to review the work of Machado Allison: the dengue epidemic has a tendency to circulate in a clockwise direction. It is therefore expected that from Cuba--where 67 persons have already died from the disease--it is proceeding to other Caribbean islands and thence to Venezuela via Margarita or Sucre, particularly now when so many vacationers are traveling to neighboring islands.

The researcher has worked with three species of mosquitoes in the General Cemetery of the South and in that of Punta de Mulatos, although he has also collected specimens in most of the country's cemeteries.

"One of the most important factors in the failure of campaigns aimed at controlling or eliminating urban mosquitoes is the drastic increase in the number of larva breeders generated by human activity," Prof Machado Allison says in the introduction of his article.

He cites figures: the number of potential breeders in the General Cemetery of the South is estimated at 190,000 containers, or 0.3 per square meter. Of these, 43 percent contain water during the dry season and 76 percent during the rainy season. The number of larvae varies between 7 and 51 million.

Machado Allison has studied the following species: *Culex corniger*, *Culex fatigans* and *Aedes aegypti*. The last two are the most abundant and dangerous. *Culex fatigans* is the transmitter of filariasis, better known as elephantiasis. *Aedes aegypti* transmits not only dengue but also the dreadful microorganism which causes yellow fever.

The problem of flower containers in cemeteries is that of longstanding tradition. It would appear sacrilegious to request the families of the deceased to eliminate flowers. However, why can the containers not be replaced with natural materials or, in any case, why cannot artificial flowers be used? Machado asserts that flowers provide a perfect culture medium for larvae in that they offer abundant organic material when they decompose, not to mention that the mouth of the container is often stopped up--generally with cement--thus preventing the water from evaporating.

The highest level of larvae is encountered in June and November, thus coinciding with the days on which families bring the most flowers, that is, Mother's Day and Decoration Day.

The UCV [Central University of Venezuela] researcher recalls that in about 1919, when there was an epidemic of yellow fever in Caracas, there was a regulation making it mandatory to destroy the containers. "I do not know if that regulation still exists, but it would be well to verify that point," the professor says. He explains that water remaining in the containers does not depend on rain but exclusively on people who visit the graves and bring flowers.

Unlike other breeding places of urban larvae, the cemetery's containers last longer being of cement with greater density per surface unit--3 liters of water each--and greater uniformity in shape and capacity.

However, Machado has come across other larva breeding places: fountains in badly kept parks or buildings, such as that of the urbanized Sans Souci where he has seen a vast number of larvae and mosquitoes. He has also observed this in homes where there are pools of stagnant water, in gullies where there are sacks of rubbish and in various places where water is stored.

At present, when fumigation campaigns are being initiated in the coastal cities, it would be opportune to consider the results of that work and study the possibility--while preserving tradition--of replacing containers of flowers with potted plants or, at the least, with artificial flowers. These measures do not always have to be in the form of an emergency as is usually the case in Venezuela but should be undertaken as a long-range plan.

8568

CSO: 5400/2188

POLIO OUTBREAK SUSPECTED IN VARIOUS CITIES

Twenty-Eight Possible Cases

Caracas EL DIARIO DE CARACAS in Spanish 4 Jul 81 p 35

[Text] Yearly campaigns to educate the public and give vaccinations are worthless if parents and guardians do not take their children to be vaccinated. This is currently happening in the case of polio, which is why, when there seemed to be a trend toward eradication of this disease from the country, 28 suspected cases have appeared in Caracas, Maracaibo, Valencia and Puerto Cabello.

This exceeds the total number of cases recorded last year, when 10 cases were suspected and only two were diagnosed.

The director of public health of the Ministry of Health and Social Welfare reported that none of the children suspected of suffering from infantile paralysis had been vaccinated. He indicated that the virus responsible for the illness has already been identified in several of these cases, while in others it remains to be verified.

The health director emphasized that the virus has not been eradicated from Venezuela. It occurs in sewers and filth. This results in a risk to the infant population of a susceptible age--from 2 to 23 months.

The presence of polio virus is suggested when a child shows fever and paralysis of some limb. In such situations, a blood test is performed immediately, and one week later it is examined to determine whether there has been a reaction to the polio virus.

Danger in Anzoategui

Caracas EL NACIONAL in Spanish 1 Jul 81 p C-9

[Article by Ebert J. Lira]

[Text] The Ministry of Health's department of epidemiology in Barcelona fears that an epidemic of infantile paralysis of 40 percent of the susceptible population may be unleashed on the state of Anzoategui, due to the fact that a majority of the population of children in the state has not been vaccinated against this terrible scourge.

This information was released here by Dr Narciso Lopez, head of the Ministry of Health's department of epidemiology in Anzoategui. Doctor Lopez said that his colleagues were called to an urgent meeting in Caracas by Ministry of Health officials, where they were warned to be on the alert, since it is known that the neighboring country of Colombia and other Caribbean countries have undergone a severe epidemic of infantile paralysis.

"It is said," indicated Dr Narciso Lopez, "that the number of children affected approaches 200, and that they are located in the border region--especially in El Amparo, where no control exists whatsoever."

9839

CSO: 5400/2157

## BRIEFS

MEASLES FROM BRAZIL--Ciudad Bolivar, 19 Jun--The outbreak of a measles epidemic in Guana, Alto Caura has cost the lives of 24 Indians and resulted in the hospitalization of some 100 more. The disease was brought into this country from Brazil, according to Dr Celsa Sampson of the Commission of Public Health's department of epidemiology. Doctor Sampson, who personally investigated the situation in Guana, said that a seven-year-old girl from Coronina, an Indian community half an hour away from the Venezuelan border, had arrived in Guana with the measles and infected the majority of the inhabitants. The child came from Brazil with her parents. The epidemiologist said that the situation was already under control and that no more deaths have been reported. This morning, she said, 10 of those stricken by the epidemic were released from the hospital and will return to their homes after receiving nutritional treatment. This reported asked Doctor Sampson if she didn't find it a surprising coincidence that an epidemic of this calibre should occur twice in the same region: in December 1976, 20 Indians--eight adults and 12 children--died under similar circumstances. [Text] [Caracas EL NACIONAL in Spanish 20 Jun 81 p D-17] 9823

SIERRA DE PERIJA VIRUS--Maracaibo, 8 Jun--The Indian population of Sierra de Perija is suffering from an epidemic of a hepatic virus type B, and the state government in Zulia will devote considerable funds toward a massive gamma globulin vaccination program for the area. According to a statement today by public health commissioner Pedro Romero, the virus is devastating since the Indian population does not possess defense mechanisms or antibodies to combat the disease. This afternoon, Romero announced, there will be a second meeting of the commission studying the virus, a group consisting of virologists and public health specialists from the Ministry of Health and the University of Zulia. He said that in a meeting with the Indian Commission, it was recommended that tribe members affected by the virus do not disperse in order that they may receive adequate treatment. Romero asserted that there are no signs of yellow fever in the region. Vaccinations were conducted there some time ago, and some of those who had been vaccinated were among the B-virus victims. [Text] [Caracas EL UNIVERSAL in Spanish 9 Jun 81 p 2-26] 9823

TYPHOID FEVER OUTBREAK--Trujillo, 24 Jun--Trujillo is the site of an alarming outbreak of typhoid fever and, according to councillor Guillermo Torres, at least 25 persons with the disease represent different parts of the city that may be affected. Torres said that the situation is increasingly grave, as there are doctors who have already shown symptoms of the infectious disease and there is no preventive

vaccine. State Governor Dora Maldonado de Falcon, who is in Bocono--which is in a state of emergency owing to the recent flood--said she had not yet received an official report on the situation in Trujillo. And the state's health commissioner, Saul Medero, is in Caracas. [Text] [Caracas EL NACIONAL in Spanish 25 Jun 81 p D-24] 9823

ALERT ON DENGUE FEVER--Venezuelan health authorities recommend that the public be on the alert against possible appearances of dengue fever cases, and take particular precautions to prevent the formation of stagnant pools of water where the Aedes Aegypti mosquito, the vector for this virus, can breed. The recommendation, authored by Dr Rafael Albornoz, who is the public health director for the SAS, is important in view of the fact that Cuba has suffered an epidemic outbreak, with 70,000 sick and 37 dead of dengue fever. Symptoms include hemorrhaging, fever, reddish skin eruptions, indications of toxicity, shock and chills. The disease attacks the central nervous system, and if any of these symptoms occurs, Albornoz advises immediate medical attention, since dengue fever often causes serious complications in infected individuals. The situation is more serious when those affected are minors. [Text] [Caracas EL UNIVERSAL in Spanish 5 Jul 81 p 1] 9839

VIRUS SIMILAR TO DENGUE--Bolivar, 29 Jul--Grippe with fever, vomiting and pain in the joints is worrying Bolivar residents in the belief that it is an outbreak of dengue, a contagious, fever-provoking disease presently afflicting Curacao and other peoples of the Antilles. The most outstanding cases have occurred within the government itself involving the director of policy, Dr German Texier, who has spent several days in bed, and his wife. The disease has also struck the messenger of the Directorate of Policy and two sisters of the directorate's secretary, Miss Heidy Sifontes. In other sectors of the city this painful grippe has made its presence known and has frightened many of the citizens who are now seeking preventive protection through lemons. Dr Ramon Armando Perdomo, head of the Health Committee, said that there is no known cause of dengue in the city. In his opinion, bacteriological confirmation is necessary and in the cases being reported this could be a virus similar to dengue. He said that Aedes aegypti, transmitter of the dengue virus, undoubtedly abounds in the city but that the committee has ordered the pools to be cleaned up and the city fumigated as a preventive measure. [Text] [Caracas EL NACIONAL in Spanish 30 Jul 81 p D-10] 8568

CSO: 5400/2188



DETAILS ON INCIDENCE OF LEPROSY GIVEN

Salisbury THE HERALD in English 28 Aug 81 p 15

/Article by Sheila White/

/Text/ Disease may have reduced many of them to human flotsam, but pity has no place in their village where, as members of a tightly-knit community, they live independent lives.

The old man's lower face may be missing but he still chuckles a welcome.

An elderly woman's hands and feet have disappeared but that does not stop her from extending a stump in greeting.

Eyes--those that can see still see--light up at the sight of a stranger. Smiles are wide.

Few of the 76 inmates of Mtoko's Mtemwa leper village have much left except their smiles and it is the radiance of these--combined with their dignity and unfailing courtesy--which dispels the horror of their deformities.

Leprosy, that disease feared for centuries, has still not been checked.

In Zimbabwe, there are 5 000 known victims and 250 new cases come to light each year.

Advances in medical sciences have resulted in a tiny blue pill called Dapsone, which costs almost nothing and arrests the disease long before deformities begin to appear.

Hailed as a miracle cure, Dapsone taken daily has transformed the fate of leprosy victims.

In bygone ages lepers were required to call out, "Unclean, unclean!" and ring bells warning of their approach as they travelled, distinctly garbed outcasts, forever alone.

"Today early diagnosis results in the patient being given a pat on the head, a supply of pills which must be taken every day and being told to go home," said Dr Louise Westwater.

The Dapsone treatment must continue daily for five years after the last active signs of disease have disappeared.

Some patients were admitted to hospital for initial treatment but most lived at home while undergoing regular check-ups, Dr Westwater added.

Her own deep involvement with leprosy began in 1959 in Gwelo, five years after she arrived in this country from Scotland.

Since then her interest in helping the patients has never flagged. For the last 10 years she has been vice-chairman of the Zimbabwe Leprosy Association. The term "lepers" is now internationally unacceptable, Dr Westwater maintains; she calls them leprosy patients.

In both forms tuberculoid and lepromatous, leprosy is contagious but "not like measles," Dr Westwater points out quickly since people have been known to work for years among lepers without contracting the disease.

The bacillus appears to attack the poor and while not being hereditary is frequently confined to families.

"Nobody knows for sure how it spreads and my own theory is that it could be carried by earthen floors in huts, but this has never been proved. Given the same exposure some people will contract it while others will not," Dr Westwater said.

Nor is there a cure. An antibiotic drug called Rifampicin, which is very effective but expensive and unsuitable for lifelong use, holds the best chance of a complete cure.

"Given unlimited money, quantities and facilities for administration, this drug constitutes the nearest cure," Dr Westwater said.

Since the bacteria which causes leprosy could only be grown on the foot pads of baby mice or inside the liver of the South American armadillo, research was extremely difficult as well as limited in scope.

"Worse is the fact that this insidiouscrippler takes between seven and ten years to incubate. Early diagnosis and treatment with Dapsone is vital. Left untreated, mutilations will occur while a hand or foot which has lost all feeling may easily be subjected to severe burns or other forms of destruction."

In the offices of each provincial health officer a register is kept of leprosy patients. The largest concentration is in the hot, steamy Zambezi Valley. There is a high incident along the Mozambique border.



During the war many patients in remote, inaccessible areas went without their pills. Others used the hostilities to hide undetected in the bush terrified of being declared social outcasts.

Now the crusade against leprosy has gained momentum as scouts go out to track patients and diagnose new ones. New cases come to light in areas where the incidence has always been high.

To date there has been no breakthrough medical discovery to eradicate the disease.

"We take one step forwards and one backwards. We have been using Dapsone in too small doses, which we are now increasing, while some patients have built up a resistance to it."

Will leprosy ever be eradicated?

"We cannot eradicate it in Zimbabwe while it still exists in surrounding countries. Borders mean nothing to the leper patient. Children are still contracting it and although they are not being crippled any longer it is still depressing," Dr Westwater said.

Modern drugs to arrest deformities came too late for many of the men and women occupying the 70 huts in the Mtemwa

settlement run by the Zimbabwe Leprosy Association.

Jesuit priest, Brother Lawrence Makonora (41) tends to their welfare with a staff of three.

In Mtemwa the youngest patient is 38 years old. The old ones are too old to remember their ages or when they first contracted leprosy.

Below the Mtoko hospital, in a valley sheltered by huge rocks alongside a shady tree-lined avenue the barren, dusty village is the only home they know.

The lepers have neither friends or relatives to care for them.

Some had lived in hiding for years before entering the settlement. For others the introduction of modern treatment only 18 years ago came much too late.

"One hopes that today's patients will never reach this stage," Brother Lawrence said sadly as he watched old Mariyafina (whose name means "I am fed up with money") waiting patiently for her rations.

Someone helps Mariyafina carry her food home because both her hands have been amputated and her deformed feet barely carry her weight.

In the 11 months during

which Brother Lawrence has been in charge of the settlement, five inmates have died.

More patients are waiting to be admitted.

Dapsone is administered daily to all patients and those needing medical attention are taken to the nearby hospital where the staff are already overworked.

"We really need the regular services of a doctor who would visit us to check the patients," said Brother Lawrence.

Once a week rations are distributed. The whole community gathers in the central square to receive mealie meal, sugar, meat, bread, soap and tea. Sometimes there are sweets or jam.

Content with little, the patients hobble back happily to their huts with enough food for the week.

The chairman of the Zimbabwe Leprosy Association, Mr Boniface Foya (56), announced this week that the Department of Social Services had just increased assistance for each one from \$7 a month to \$30.

"This now means that instead of only getting half a kilogram of meat each week they will be able to have a kg twice a week as well as more other foods," said Mr Foya.

## BRIEFS

MALARIA CONTROL--The first of a new range of trucks specially developed for use in Central African conditions and successfully launched in countries such as Kenya and Nigeria, is to be supplied to Zimbabwe's Ministry of Health for use in its malaria control work. Known as the Landmaster, this rugged vehicle is being supplied by British Leyland (Zimbabwe) Ltd with the help of British aid money to Zimbabwe, a spokesman for the company said in a statement yesterday. It is ideally suited to this country's rural development needs, with its capability for rough road and off-the-road operations as encountered in malaria and tsetse fly control programmes and National Parks management, the statement says.

CSO: 5400/5243

SUCCESSFUL CAMPAIGN REPORTEDLY WAGED AGAINST MALTA FEVER

Nicosia BOZKURT in Turkish 17 Jun 81 p 1

[Text] Nicosia--The campaign launched against Malta fever in our country in October 1977 is succeeding. Malta fever, also called "abortion disease," also presents a threat to humans.

Large livestock thought to be infected continue to be destroyed, while the total inoculation campaign goes on for small livestock. Seventy-seven large livestock found to be infected in 1979 were slaughtered and their owners compensated by the state. Efforts have begun for the collection and slaughter of the 60 animals which tested positive in the 10,034 serum tests administered in December 1980.

Collection Procedure

The first part of the collection campaign, to operate 3 days a week, began yesterday in Duzova Village and owners of the collected cattle were paid on the spot a pre-set, per-head amount. The infected cattle, collected under the supervision of a veterinarian, are sent for slaughter, again under veterinary supervision, the same day even if they are 8.5 months pregnant.

First Year's Campaign

Bearing in mind economic conditions in the fight with this disease, inoculation was chosen instead of slaughter for small livestock (sheep and goats) infected with Malta fever. REV-I vaccine was obtained for this purpose from the Istanbul Pendik Veterinary Control and Research Institute and the campaign to inoculate all sheep and goats within the Federated State borders was begun. This inoculation program is to continue for 8 to 10 years. The first year's inoculation campaign, which is now in the final stages, has seen approximately 360,000 head of small livestock inoculated so far.

8349

CSO: 5400

## BRIEFS

FATAL CATTLE DISEASE--Thane, August 3--Cattle in Wada and Talasari talukas are suffering from an infectious disease locally known as farya, and animal husbandry officers of the government are rather slow in rendering helps to the farmers for treatment of the cattle. This information was given by Mr Arvind Pendse, general secretary of the BJP district unit, to newsmen here after a visit to the area. He had found cases of this type in Jamsar and an adjoining village near Wada. It is a disease of the cattle wherein the legs are affected because of infection and it proves fatal. Preventive measures have to be taken quickly and on a massive scale, he stated. [Text] [Bombay THE TIMES OF INDIA in English 4 Aug 81 p 4]

VIRUS ATTACKS DOGS--Madras, Aug 3--A highly infectious disease suspected to be of viral origin, has claimed the lives of at least 100 pups in Madras, in the last few weeks. Nearly 500 pups, showing symptoms characteristic of enteritis, were brought to the Madras Veterinary College Hospital for treatment and 400 of them were treated successfully by blood transfusion and saline drip, said Dr T. M. Thangaraj, Head of the Clinical Department. On an average, 10 pups were brought to the hospital every day. Vomiting, loose motion and loss of appetite, accompanied by high temperature were the symptoms. The rapid spread of the disease and the symptoms have led specialists to suspect the pups to have been infected by Parvo and Rota viruses. [Excerpts] [Madras THE HINDU in English 4 Aug 81 p 11]

MYSTERY DOG DISEASE--Madras, Aug. 10. The incidence of the pup killer disease, is still high in Madras. The Veterinary College Hospital continues to admit nearly 10 cases, according to Dr. V. M. Ramasami, Dean of the College. Doctors are trying their best to save the pups. The mortality rate has come down significantly through timely intervention. The symptoms exhibited by the pups and their non-response to antibiotics suggested that the disease could be of viral origin. Investigators were under way to confirm the diagnosis, said Dr. Ramasami. [Text] [Madras THE HINDU in English 11 Aug 81 p 9]

CSO: 5400/7130

BRIEFS

NOXIOUS GRASSES--A lack of technical assistance has caused cattle deaths in the Sena Sugar Estates herds. The February floods of the Zambezi River were another scourge for the workers in this sector, who attempted the immediate transfer of the herds to higher ground, but where, unfortunately, pasture lands are few. According to engineer Rogerio Henrique of the Luabo production unit, cattle deaths are caused both by the lack of regular technical assistance and by the infestation of this area by a parasitic plant prejudicial to animals called "vetiveria negritana." [Excerpts]  
[Beira NOTICIAS DA BEIRA in Portuguese 9 Aug 81 p 2]

CSO: 5400/5250

## BRIEFS

**SHEEP SCAB QUARANTINE**--The Directorate of Veterinary Services has confirmed an outbreak of sheep scab in the Mariental and Keetmanshoop areas for the first time since 1977. According to a statement made to the press, affected farms and neighbouring premises have already been quarantined and compulsory dipping of all sheep is in progress. During the next few months more intensive inspections of sheep in various districts are to be carried out by veterinary officials and all stockowners have been requested to cooperate fully with the veterinary authorities to eradicate the disease as soon as possible. Sheep scab, caused by the *Psoroptes Ovis* mite, is a scheduled disease and even the suspicion of its occurrence must be reported to the State Veterinarian Stock Inspector or the Police. Negligence in this respect as well as the transportation of infected stock is an offence according to the Animal Diseases and Parasites Act. The most common symptoms of sheep scab are intense irritation, leading to scratching, biting and plucking of wool, loss of hair and the formation of serum crusts and scabs on the infected parts of the skin. Severe infestation leads to rapid loss of condition and even death. [Text] (Windhoek THE WINDHOEK ADVERTISER in English 18 Aug 81 p 4)

CSO: 5400/5245

BRIEFS

RINDERPEST AFFECTS CATTLE--Kathmandu, August 8; The veterinary clinic of Baitadi district provided treatment to some 5,112 cattle heads in the last fiscal year, it was learnt, reports RSS. Cattle disease had spread in the district following the earthquake of last year that left many cattle injured. Meanwhile some 7,800 cattle were given anti-rinderpest vaccination this year, the office concerned said. The Office has also stressed the need of a veterinary hospital in the district. [Text] [Kathmandu THE RISING NEPAL in English 9 Aug 81 p 4]

CSO: 5400/4958

# CATTLE DYING IN GUARICO FROM UNKNOWN ILLNESS

Caracas EL NACIONAL in Spanish 1 Aug 81 p D-14

[Article by Misael Flores]

[Text] Valle de la Pascua, 31 Jul--Approximately 40,000 head of cattle have died in the past few months in the southeastern part of Guarico State, victims of a disease which is baffling scientific investigators and worrying the area's cattle breeders, according to information released by Juan Moises Padra, chairman of the Agriculture and Livestock Producers Association [APA] of Infante District.

The spokesman explains that "the death of cattle began in Santa Maria de Ipire and gradually spread to the entire southeastern area of Guarico State achieving a magnitude which is of deep concern to cattle breeders, especially since lack of knowledge about the disease's etiology is making it impossible for them to fight it."

The APA chairman of Infante District says that "this rare disease which is decimating Guarico's cattle was not detected by the investigators, even though MAC [Ministry of Agriculture and Livestock] officials visited the area several times and took live animals, some which had recently died and some which had been dead 2 days to the research centers to make all necessary analyses. Despite all this, they have not yet succeeded in establishing a diagnosis which will make it possible to combat the disease which is killing off our herds."

The observer points out that "there are many cases of small breeders with herds of 50 head who now have only 10 or 15 remaining which, for them, represents total ruin."

He adds that "in the case of these small producers the situation is more serious, since they owe the few remaining head to the BANDAGRO [Agricultural and Livestock Development Bank] and have asked that credit institution for permission to sell what is left to slaughterhouses so that they may pay something on their outstanding debt before those few head also die."

As an example of the seriousness of the situation and the harm it is causing small producers, he cited the case of a young breeder who had about 200 head which were liquidated by the strange disease. "This producer has now been obliged to seek employment in the city to cover his household needs."



"It is of concern to the Cattle Breeders Association," Moises Padra emphasized, "that MAC's diagnostic center devote its efforts seriously and effectively to the study of this disease until it can be identified and means found to combat it successfully before all our cattle are exterminated."

He went on to say, "If we do not put a stop to this situation, our fields will be sown with skeletons and our breeders ruined and indebted to financial organizations with the result that there will be more unemployment and more serious social problems."

The observer said he is deeply concerned that this case was not investigated with the seriousness it required since its gravity is obvious to everyone. As an example, he cites the case of breeders who have spent 20 or 30 years raising cattle and selling only the minimum necessary and now, as a result of what is happening, have fewer head than when they first engaged in this activity.

In response to a journalist's question, Juan Moises said that in the area affected there are many more than 200,000 head of cattle and that the rate of mortality, in round numbers, is 20 percent, with instances of more than 50 percent. Hence, the number of dead cattle to-date is more than 40,000.

In conclusion, Juan Moises asserted that "the strange malady which is decimating the cattle of southeastern Guarico and threatening to spread to other areas of the state and country is violently attacking our animals and killing them off in a matter of hours without consideration of sex, age or physical condition. Among the symptoms observed are: blood in the urine and loss of muscular control which causes them to stagger and finally fall."

#### Criterion of Agricultural and Livestock Research Fund

Engineer Igor Arias and Veterinary Dr Gustavo Lopez of the National Agricultural and Livestock Research Fund issued a press release in which they defined the official criterion of this organization in the following terms:

In view of the high mortality rate among cattle, the Northeastern Guarico Experimental Station (FONAIAP) is conducting studies in the spheres of mineral nutrition, parasitology and pasturage.

"Our research has permitted us to diagnose the following problem in the area in question: 1) A serious shortage of phosphorus and calcium in both the soil and vegetation, resulting in a deficiency of those minerals among the animals. 2) A high incidence of parasitic diseases, particularly anaplasmosis and babesiasis, both transmitted by cattle ticks. 3) Nutritional deficiency due to inadequate pasturage both in quality and quantity coupled with general mismanagement of the herds. 4) As a result of the phosphorus shortage, there is a depravation of appetite (vitiated appetite) among the animals which causes them to ingest contaminated foreign material which can produce certain diseases, especially botulism which is fatal.

"As a way to resolve this problem, FONAIAP is considering the following corrective measures: giving the herds mineral salts throughout the year; adequate health plan

vaccinations and injections against parasites); the planting of pasturage adapted to the area and proper management of that planting; and improvement in the general management of the herd with regard to the establishment of groups of animals, with particular emphasis on calving."

8568

CSO: 5400/2188

# FOOT-AND-MOUTH DISEASE FROM CONTRABAND CATTLE FEARED

Caracas BOHEMIA in Spanish 3-9 Aug 81 pp 62-65

[Article by Luis E. Perez Mirabal]

[Text] A serious threat to Venezuela is the possible presence in Colombia of foot-and-mouth disease virus "C", as the result of illegal imports of bullfighting cattle from Spain, a country in which several outbreaks of this virus have been discovered. A statement from cattlegrower Jorge Luis Osorio, responsible for the illegal import of bulls and heifers--concerning the death of cattle from asphyxiation could not be obtained by Colombian authorities who were prevented from entering the "Veracruz" ranch where the airplane had landed which transported the animals from Spain.

The first report of Spanish cattle on Colombian soil was received by Colombian authorities from a news story made available to the international press by cattleman Osorio himself. The report stated simply that 100 cattle, including bulls and heifers, had died of asphyxiation on the airplane which had transported them from Spain to Cartagena. The purpose of the report was to confuse the authorities of the neighboring country by making it appear that none of the animals had survived. This scheme produced the following effect: skeptical individuals asked the authorities to demand the horns of the animals as evidence that they had really died.

## Introduction of the Animals into the Country

On 14 June 1981, a cargo plane flew into the country over the Atlantic coast of Colombia in the early hours of the morning. When it passed over Barranquilla, it did not report to the control tower of the local airport and continued on to Cartagena, where it landed at the Crespo airport, thus completing a long trip which had started in Seville. A total of 100 head of bullfighting stock was quickly deplaned without processing of any kind. The animals were quickly transported by truck to the Veracruz ranch, after which Osorio, who was responsible for smuggling the cattle into the country, contacted the international press and notified it of the death of the animals.

## Colombian Government Acts

Cries of alarms were raised in Colombian cattlegrowing sectors against the illegal introduction of Spanish cattle into Venezuela, because it is widespread public knowledge that the presence of foot-and-mouth disease virus "C" has been detected in Spain, a virus which is characterized as most dangerous to cattle and very difficult to control.

As a result of this, the government took a hand in the matter and ordered the Ministry of Agriculture and the Colombian Agricultural and Animal Sciences Institute (ICA) to investigate the case in order to establish responsibilities and take the necessary steps with respect to sanitary control. Regrettably, according to Colombian cattlemen themselves, the intervention of the Agricultural Ministry was not as forceful as expected, as expressed in an open letter to Minister of Agriculture Dr Luis Fernando Londoño Capurro. "As is now public knowledge," asserted members of the Colombian Association of Bullfight Stock Breeders (ASTOLCO), on 14 June 1981 a large number of cows and stud bulls for bullfighting purposes was brought into the country from Spain without compliance with any of the sanitation procedures required by the national government by persons who are not members of this Association. They also violated all the regulations in the customs and foreign trade sectors. All of this constitutes cumulative crimes which have been unpunished up to now."

"Our Association," the open letter goes on to say, "has remained prudently silent up to now (7 July 1981), in view of the forceful public statements made by the minister on several occasions and your personal comments to some of our associates to the effect that the required measures would be taken to quickly slaughter the contraband animals. However, today the association notes with deep concern that almost 1 month after these animals were illegally brought into the country this measure still has not been adopted, which is the only satisfactory solution to control the serious sanitary emergency the national cattleraising sector is experiencing. ASTOLCO recommends that the Minister of Agriculture carry out the order for the immediate slaughter of all the imported contraband cattle and requests that proof be provided, such as the parts of the hides of the dead animals upon which the brands of the Spanish cattlegrowers appear showing where these cattle were purchased."

In response to this public proposal, Minister Londoño Capurro issued a communique on 10 July 1981 in which he reported: "The first thing we did was to commission the manager of the Colombian Agricultural and Animal Sciences Institute and the Ministry Cattle Adviser to travel to Barranquilla and Cartagena to investigate the incident and to ensure compliance with import regulations. We also requested Customs Director Jam Gen Jose Maria Rivas Forero to prepare a report on the attitude taken by civil servants of the Cartagena Directorate with respect to this case. With the import of these cattle confirmed on 25 June, on 1 July resolutions Nos 417 and 363 of the ICA and the ministry, respectively, were issued by means of which the entire Veracruz ranch was placed under quarantine, where it appears that some of the dead cattle were buried, as well as the municipality in which said ranch is located; and additional sanitation measures were taken, such as control over movement of animals, epidemiological surveillance and serological samples, so as to prevent the spread of the outbreak in the event it appears." Up to now all appears very well.

#### The True and Serious Situation

What is certain in this situation is that neither the Colombian Government nor anyone in that country knows exactly how many animals entered the country illegally; how many died, if indeed some of them did die; and how many and where are the surviving animals. The latest report indicated that some of the Spanish animals had been hidden on a ranch in Manizales, between Medellín and Armenia. Concurrently, veterinarian Oswaldo Acosta, ICA director of the coastal region, said that the 53 head of cattle which had arrived in a clandestine airplane without a flight plan had died and were buried in a common pit on the very same ranch. Acosta said that due to the state of putrefaction, the remains had not been counted; however, there was no animal from the shipment at the ranch.

The ICA Board described the introduction of these cattle into the country as a crime against the Colombian cattlegrowing sector, because of the possibility they are carriers of virus "C," which is highly pathogenic and the most lethal foot-and-mouth disease virus.

At the same time, and as a demonstration of the uncertainty of the Colombian authorities with respect to the situation created by this import action, the Ministry of Agriculture is daily publishing a notice in the newspapers whose text is as follows: "Warning to cattlegrowers: you can save the country from a catastrophe. Virus "C" is the most serious foot-and-mouth disease virus and may be present in Colombia. Recently, a shipment of bullfighting cattle was brought into the country from Spain, without compliance with the requirements of Sanitation Regulations, namely: prior quarantine in the country of origin quarantine which was supposed to have taken place in Barranquilla. Mr Cattleman, in the event you see animals with black or reddish coats with characteristics similar to this animal (here the photo of a Spanish bull is inserted) or animals which have these foot-and-mouth disease symptoms: salivation, lameness or sores on their udders, immediately call one of the following telephone numbers (at this point, several telephone numbers and official organizations are listed)." Obviously, there is no absolute certainty that the animals illegally brought into the country have died.

#### The Threat to the Venezuelan Cattlegrowing Sector

Our situation as a country bordering Colombia places us in a serious position because of the possibility of an outbreak of this kind of virus in the neighboring country. About 9,000 tons of meat for industrial consumption are exported by Colombia annually; and the seriousness of the floods which are scourging our cattlegrowing states has caused high officials of the MAC [Ministry of Agriculture and Livestock] to take action to obtain about 10,000 tons of meat for human consumption. On the other hand, a large number of live animals are transported from Colombia to Venezuela for bullfighting purposes. That is to say, the threat exists; we have it hanging over us and all we can do is wait to see what happens, possibly a great tragedy for the cattlegrowing sector of the Andean Pact.

8143

CSO: 5400/2190

AHPROCAFE LEADER: GOVERNMENT INACTIVE ON COFFEE RUST

San Pedro Sula LA PRENSA in Spanish 5 Aug 81 p 3

[Excerpt] Tegucigalpa--"We do not feel that the government has given enough attention to the problem coffee rust presents to the country's economy." This statement was made yesterday by Wilfredo Herrera, manager of the Honduran Coffee Producers' Association (AHPROCAFE).

"We also do not know," he said, "whether the government has taken action at any other level to obtain financing and to implement programs to fight this disease.

"We do not understand why the government has not given the required importance to the problems of coffee rust and coffee borer [broca], as with the disappearance of or serious damage to the coffee plantations the government would not only see its revenues from taxes on exports of this product reduced but there would be a decrease in foreign exchange coming into the country and would be confronted by an enormous social problem: the migration of those who live off coffee to the cities," the AHPROCAFE leader said.

"We are greatly surprised that the government, or better stated its civil servants, knowing the magnitude of the problem, have not sought more effective mechanisms. Although it is true that a law was passed called the Emergency Anti-Coffee Rust Committee, the fact of the matter is that it is inconceivable that an allocation of 400,000 lempiras will serve to combat the diseases now affecting national coffee production," Herrera said.

"That money will barely cover the cost of publicizing what coffee rust is and to explain how to fight it; but what good does it do to give this explanation if there is no money for the producers to implement the recommendations made to them during discussions with that committee," our source added.

On the other hand, it has been said that the brand new Anti-Coffee Rust Committee has not met in several weeks to continue "its intensive and aggressive planning against this disease," at a time when the coffee producers find themselves helpless as the disease advances uncontrolled toward the producing regions of the country.

The largest outbreak of coffee rust has been discovered in the vicinity of Lake Yojoa, Comayagua, La Paz and Intibuca.

8143

CSO: 5400/2189



## BRIEFS

AID FOR CASSAVA PESTS--Imo State House of Assembly has passed a motion urging President Shehu Shagari to assist the state government with 24 million Naira to enable it to combat cassava pests. The motion was co-sponsored by Mr. A. C. Mezu (Owerri East) and Elem Okoh (Afikpo Urban). When debate on the bill was started, Mr. Elem Okoh called on the Federal Government to give a serious attention to the damage being done by pests on cassava plants in the state. Mr. Okoh pointed out that since cassava was a raw material for staple food in the state and the nation as a whole, pests destroying it should be fought relentlessly in the interest of the masses. The legislator advised the Federal Government not to look at the issue from the political point of view but from human angle because further delay would lead to endless starvation. In his own contribution, Mr. Peter Akah, representing Ikeduru Constituency, expressed the opinion that Federal Government should come to the aid of the state since the same consideration was given to other victims of disaster. Mr. Dennis Ogwuegbu, representing Amainyi Constituency, stated that one of the aims and objectives of the Green Revolution Programme, launched by the Federal Government, was to increase food production but regretted that this objective was yet to be achieved. Mr. Ogwuegbu then asked what is the Anambra/Imo River Basin Development Authority doing. Has the authority not seen the pests destroying the cassava? [Text] [Kaduna NEW NIGERIAN in English 5 Aug 81 p 7]

CSO: 5400/5244

## BRIEFS

WHITE FLIES ATTACK COTTON--Nawabshah, Aug. 19--The attack of "gassid" and "white fly" on cotton crop in Nawabshah district was on an increase and reaching the "economic injurin" level. This was observed by the staff of agriculture department after a field survey of standing cotton crop. The farmers in the district were advised to start spray operations. The Agriculture Department has also opened three centres at Nawabshah, Sakrand and Moro. At each centre 20 hand sprayers have been kept for sale to needy growers. The department officials said that pesticides were available in abundance. The agriculture staff will also be available at these centres to guide the growers and will provide free service for repairing the defective sprayers.--APP. [Text] [Karachi BUSINESS RECORDER in English 20 Aug 81 p 3]

CSO: 5400/4638



PEOPLE'S REPUBLIC OF CHINA

BRIEFS

INSECT PESTS--The Fujian Provincial People's Government recently issued an emergency circular urging all localities in Fujian to intensify measures to control insect pests in the rural areas. The circular warns that this year's late-rice crop is seriously threatened by insect pests which also plagued the province's peanut crop early this year. It says that 470,000 mu of single-crop rice has already been affected by blast disease and that large tracts of cropland are plagued by rice borers, leafhoppers and other pests. It adds that all-out efforts must be made to preserve late-rice seedlings. The circular calls on commercial, banking, marketing, supplying and transport departments in Fujian to give full support to the peasants' struggle against insect pests. [Fuzhou Fujian Provincial Service in Mandarin 1120 GMT 22 Aug 81]

CSO: 5400/2194

# INSECT PESTS INFEST 5TH MONTH SPRING RICE

Hanoi NONG NGHIEP in Vietnamese 5 Jun 81 p 2

[Article: "Actively Exterminate, Prevent Harmful Insects From Infesting 10th Month Seedlings"]

[Text] At present, army weevils are appearing in Thai Binh, Ha Nam Ninh, Ha Bac..., damaging the 5th month spring rice. They are scattered on all the fields with an average density of 7 or 8 insects per square meter and of 35-40 insects in high-concentration areas. If army weevils are not controlled in time, they will greatly multiply in June.

In recent years, the rice stem borer has become an epidemic. In 1980 thousands of hectares of early 10th month seedlings in Ha Nam Ninh, Ha Son Binh, etc. were infested by rice stem borers causing 20-30 percent of the buds to wilt. Some fields had to be replowed and reseeded. In early May, insect concentration was still low, only 1 or 2 insects per square meter; however, they multiplied many times over in drought-causing hot weather, and moths were seen frequently in late May and early June.

Rice case worms have severely damaged the recent 5th month spring rice crop in Thai Binh, Ha Nam Ninh and Ha Son Binh, damaging boots, reaching a concentration of 100 insects per square meter in some fields.

Paddy thrips also have severely damaged the 5th month spring rice in Ha Nam Ninh and Ha Bac with a concentration of thousands of insects per square meter. Thrips cause rice stalks to wilt.

We must actively exterminate harmful insects with all methods to keep the late spring rice infestation from spreading to 10th month seedlings. We must spray insecticides on nests of rice case worms, army weevils and stem borers living on late spring rice plants. We must harvest rice promptly, collect all the straw before sowing, plow the stubble under and steep it in water to exterminate stem borer pupas remaining in its roots. We must mow embankments to eliminate wild weed--a shelter for pests. We must increase inspection of seedling fields--one visit every 3 or 5 days beginning from the day when seedlings show 2 or 3 leaves, to uncover chrysalises of stem borers, rice case worms and army weevils in different stages of growth on seedlings, from newly laid eggs to adulthood. Whenever high concentration of one of these insects has been noted, we must quickly spray

insecticides, never allowing them to grow up and lay eggs on seedlings. We must locate rice case worms when they still are half-grown and exterminate them with insecticide (rub seedling leaves with a wet hand and worms will cling to it). On seedling fields not yet treated with anti-moth spraying, whenever we see a nest of stem borers the size of a grain of soybean covered with brown down, we must remove it promptly, before it produces young. To permit seedlings to recover quickly, we must fight drought and nurse and fertilize seedlings, especially in fields previously treated against pests.

9213

CS0: 5400/4631

INSECT PESTS AFFECT CENTRAL PROVINCES

Hanoi NHAN DAN in Vietnamese 21 Jul 81 p 1

[Article: "Increased Insect Infestation in Binh Tri Thien, Nghe Tinh"]

[Excerpt] The area of seedlings and rice infested with harmful insects is expanding. Binh Tri Thien has 20,000 hectares of insect damaged summer-autumn rice. The damaged rice area in Nghe Tinh is equal to 10 percent of the transplanted area. Peasants and cooperative members, using every means, are actively exterminating harmful insects to protect rice and seedlings. Transplanted rice is growing well in areas having enough water and not infested with pests.

The Ministry of Agriculture is urgently sending supplies including various kinds of chemical fertilizer, spraying tanks and insecticides, into the localities to provide timely aid to production.

9213

CSO: 5400/4631

## BRIEFS

KIEN GIANG RICE SCOURGES--Due to the recent prolonged period of sunshine, more than 15,000 ha of summer-fall and 10th-month rice in Kien Giang Province have suffered from drought and harmful insects. The province's agricultural and water conservancy sectors have provided production establishments with the necessary materials to combat drought and control insects. Thanks to the local peasants' control efforts, to date a total of 12,500 ha of rice have been saved. [Hanoi Domestic Service in Vietnamese 1100 GMT 21 Aug 81]

HAI HUNG INSECT INFESTATION--As of 20 August, Hai Hung Province had succeeded in saving 27,800 out of 50,000 hectares of 10th-month rice from being destroyed by insects. Tens of thousands of people have been mustered to eradicate insects and more than 45 tons of oil have been provided to various cooperatives for use against brown leafhoppers. The province is launching a "kill insects with lanterns" drive to save the entire insect-infested 10th-month rice area from being destroyed. [Hanoi Domestic Service in Vietnamese 1100 GMT 26 Aug 81]

THAI BINH INSECTS--Almost 18,000 ha of rice in Thai Binh Province have been ravaged by harmful insects. This figure includes 11,700 ha infested with thorny worms, 5,300 ha with stem borers and almost 1,000 ha with brown leafhoppers. The province's vegetation protection station has supplied various districts with 9 tons of insecticides and sent out many cadres to give technical assistance to the affected cooperatives in the extermination of harmful insects. [BK270225 Hanoi Domestic Service in Vietnamese 0400 GMT 23 Aug 81]

VINH PHU INSECTS--Vinh Phu Province is mobilizing manpower and means to control harmful insects which are ravaging 21,238 ha of rice. The province's supply corporation has supplied various cooperatives with 40 tons of insecticides, 40 tons of diesel oil, dozens of tons of kerosene and sprayers to exterminate the pests. Thousands of technical cadres have been trained in the detection and extermination of various types of harmful insects. To date the province has saved 70 percent of the infested rice area from destruction. [BK270225 Hanoi Domestic Service in Vietnamese 0400 GMT 23 Aug 81]

CSO: 5400/4636

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